

¡VOTEMOS! APPLYING A SOCIAL COGNITIVE LENS  
TO YOUNG LATINX VOTER TURNOUT

by  
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A DISSERTATION

Presented to the Department of Counseling Psychology and Human Services  
and the Division of Graduate Studies of the University of Oregon  
in partial fulfillment of the requirements  
for the degree of  
Doctor of Philosophy

June 2021

## DISSERTATION APPROVAL PAGE

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Degree awarded June 2021.

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## DISSERTATION ABSTRACT

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Doctor of Philosophy

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June 2021

Title: ¡Votemos! Applying a Social Cognitive Lens to Young Latinx Voter Turnout

The voter turnout rate among young Latinx citizens is very low compared to other demographic groups. Low voter turnout has negative impacts upon public policy and low voting behavior is associated with higher rates of depression. Relatively little is known about the influences of likelihood to vote among young Latinxs. Social Cognitive Theory provides insight into factors that influence a variety of behaviors, including voting. In the current study, I applied a social cognitive lens to develop a model of likelihood to vote among Latinx young adults, as well as a model examining the relationship between depression and likelihood to vote. A measure of voting self-efficacy was developed and tested in the current study and utilized in both structural models. Structural equation modeling was used to test the model in a sample of 500 college students, oversampling Latinx students. Results showed support for the voting self-efficacy's reliability and validity. Self-efficacy was associated with higher endorsement of previous voting behavior and higher likelihood to vote. Results also indicated that the social cognitive model of likelihood to vote did not fit the data well. The second model exploring the relationship between depression, voting self-efficacy, and likelihood to vote did fit the data well. Bootstrapping analyses indicated there was an indirect negative association between depression and likelihood to vote through voting self-efficacy. Findings suggest

that voting self-efficacy serves as a useful predictor of likelihood to vote and that improved measurement of voting self-efficacy mechanisms may improve the utility of social cognitive models of likelihood to vote. Voting self-efficacy, as established in the current study, may be a crucial domain through which both likelihood to vote and depression rates may be improved among young Latinxs. The use of a cross-sectional design limits directional and causal inferences. Future research should assess potential demographic differences in the utility of Social Cognitive Theory in examining voting behavior. Study strengths, limitations, and implications for research and practice are discussed.

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McWhirter, E.H., Cendejas, C., Fleming, M., Martinez, S., Mather, N., Garcia, Y., Romero, L., Ortega, R., & Rojas-Araúz, B.O. (2021). College and career ready and critically conscious: Asset-building with Latinx immigrant youth: *Journal of Career Assessment*. <https://doi.org/10.1177%2F1069072720987986>

## ACKNOWLEDGMENTS

This dissertation would never have been possible without the tireless work and encouragement of so many. I am deeply grateful for the support of my committee chair and faculty advisor, Dr. Ellen Hawley McWhirter. I am not an easy writer to work with; Dr. McWhirter's keen editing eye, kindness, and patience for my method have kept me on track throughout my Ph.D. process, and this has been especially true throughout this dissertation. She, more than anyone, has helped make this wild idea into a reality. I also want to extend my genuine appreciation to my full committee: Drs. Benedict McWhirter, James Muruthi, and John Seeley for their invaluable support and guidance.

I also recognize innumerable academic mentors and supporters who insisted I could do this. Dr. Horace Romano Harré, my undergraduate psychology advisor, was the first person to tell me that he saw graduate school in my future. I did not believe him at the time. "Rom" passed away the night before I first shared my current dissertation proposal. His teaching and guidance first sparked the ideas that developed into this study. Drs. Celenza, Good, Laboy, Powell, Rosiek, and Suri, thank you for your guidance and encouragement throughout the years.

Further, my friends and peers have provided more support than I can ever repay. Gil, Katie, Mindy, Nick, Paul, Paul, Reilly, Sandy, Ted, and Vicki: thank you for sticking with me. Eric, Derrick, Doug, and Jess: thank you for showing me the way, especially when I couldn't see it myself. Dani, Emma, Fallon, Jess, Kelsey, and Rachel: thank you for being the best cohort ever and fighting alongside me. Bryan, Darien, and Jay: thank you for countless writing sessions, group therapy, and all the endless frustration we cause each other.



Finally, I must thank my family. My uncle Agustin has always been the intellectual in the family and has in no small part been an inspiration in my pursuing higher education. My Nana taught me from a young age that one is never done learning. My many cousins, aunts, and uncles taught me the value of words and storytelling, lessons that have gotten me as far as I have gotten. Above all, to my brother Phillip, my parents Daniel and Yolanda, and my niece Idris: thank you, I love you, and we did it!

This dissertation is dedicated to my family: Idris, for giving me such great hope; Phillip, for always being the smart one; Daniel, for being steady; Yolanda, for always insisting I could; and above all, Maria, for working so hard that I might do something easier.

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
Latinx Voting.....	2
Health Outcomes of Political Engagement.....	3
Critical Consciousness.....	5
Literature Review Parameters.....	6
Explanations of Voter Turnout.....	7
Political Science and Voter Turnout.....	8
Sociological Explanations of Voting Behavior.....	14
Psychological Explanations of Voting Behavior.....	17
Theoretical Considerations.....	26
Social Cognitive Theory.....	27
Personal Factors.....	28
Behavioral Factors.....	35
Environmental Factors.....	37
SCT and Latinx Voting.....	39
Present Study and Proposed Models.....	40
Hypotheses.....	44
II. METHODOLOGY.....	46
Procedure.....	46
Participants.....	47
Measures.....	50

Chapter	Page
Likelihood to Vote .....	50
Political Self-Efficacy .....	51
Voting Self-Efficacy .....	51
Depression.....	52
Parental Voting .....	52
Social Persuasion .....	53
Voting Access .....	53
Previous Voting Behavior.....	53
III. RESULTS .....	54
Preliminary Analyses .....	54
Exploratory Factor Analyses.....	55
Group Differences.....	62
Structural Mode .....	65
Regressions .....	67
Modification Indices .....	71
Depression and Likelihood to Vote .....	72
Indirect Effect .....	72
IV. DISCUSSION.....	75
Specification of Variables.....	76
Demographic Differences .....	78
Model Testing and Results.....	83
Critical Consciousness .....	91

Chapter	Page
Study Strengths .....	92
Study Limitation .....	95
Implications.....	98
Conclusion .....	99
APPENDIX A.....	101
APPENDIX B .....	105
REFERENCES CITED.....	112

## LIST OF FIGURES

Figure	Page
1. Bandura's Triadic Reciprocity Model.....	27
2. Proposed Social Cognitive Model of Likelihood to Vote.....	43
3. Proposed Model of Depression, Voting Self-Efficacy, and Likelihood to Vote.....	43
4. Utilized Social Cognitive Model with Standardized Estimates.....	68
5. Utilized Model of Depression, Voting Self-Efficacy, and Likelihood to Vote.....	73

## LIST OF TABLES

Table	Page
1. Sample Demographics.....	48
2. Participant Family Country of Origin.....	49
3. Means, Standard Deviations, and Ranges of Study Variables.....	55
4. Factor Loadings for Exploratory Factor Analysis of CES-D 10 Items.....	58
5. Factor Loadings for Exploratory Factor Analysis of Voting Self-Efficacy Items.....	59
6. Factor Loadings for Exploratory Factor Analysis of Political Self-Efficacy Items.....	60
7. Factor Loadings for Exploratory Factor Analysis of Likelihood to Vote Items.....	62
8. Means, Standard Deviations, and Ranges of Study Variables by Gender.....	64
9. Means, Standard Deviations, and Ranges of Study Variables by Ethnicity.....	66
10. Bivariate Correlations and p-Values between Study Variables.....	69
11. Regression Coefficients, Standard Errors, and Significance Levels for Proposed Model Paths.....	70
12. Regression Modification Indices.....	71
13. Bivariate Correlations and p-Values between Study Variables.....	74
14. Regression Coefficients, Standard Errors, and Significance Levels for Depression Model Paths .....	75

## CHAPTER I

### INTRODUCTION

Latinx<sup>1</sup> citizens demonstrate the lowest voter participation of any major ethnic group in the United States. In the 2016 presidential election, 47.6% of Hispanic citizens reported having voted, lower than the rates of Asian American (49.0%), African American (59.4%), and European American (62.9%) citizens (United States Census Bureau, 2017). This discrepancy is not a new phenomenon; while 47%, 50%, and 48% of eligible Latinos voted in 2004, 2008, and 2012, overall eligible voter turnout during the same elections was 64%, 64%, and 62% (United States Census Bureau, 2017). Voter participation is critical in addressing social problems relating to treatment by social institutions, education, income opportunities, and health disparities, all of which are significant issues for Latinxs in the US (Alfaro et al., 2009; Benner & Graham, 2011; Valenzuela, 1999). For example, Avery, Fine, and Márquez (2017) point out that states with larger Latino populations are more likely to pass restrictive voter laws, but this effect is negated in states where Latinos vote at higher rates. Overall, Latinxs represent one of populations which could most significantly swing elections with higher levels of turnout (Jackson, 2011; Stempel & Hargrove, 2016). Given that Latinos are currently the largest ethnic minority group in the country and that the number of Latinos in the US is expected to double in the next 40 years (Vespa et al., 2018), rates of voting in this community are critical to ensure the country's political institutions are representative of its population. Further, the voting tendencies of social groups least likely to vote coincide

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<sup>1</sup> I will be utilizing the term "Latinx" for peoples who identify their ethnic origin in Latin America, but using the terms "Hispanic," "Latino/a," or a specific nation of origin when referencing research utilizing such categorizations.



with ideologies focused on supporting the most oppressed groups in the country (Milner, 2010). As such, increasing voter turnout of Latinxs would be beneficial to a variety of disempowered groups in the country.

Among potential Latinx voters, rates of turnout vary by age group. Young adult Latinxs show markedly lower rates of voting behavior than their same-age and same-ethnicity peers. In the 2016 election, only 34.3% of Hispanic citizens age 18-24 voted, compared to 46.6% of White adults in the same age range and 59% of Hispanics age 65-74 (United States Census Bureau, 2017). La Garza and Jang (2011) found that young adult Latinos were less likely to vote than their older counterparts, and that older Latinos were more likely to vote if they had completed higher levels of education. Among non-Latinos, older adults are more likely to vote, regardless of education and young adults' voter likelihood was dependent on educational attainment. Carlin and Love (2015) point out that research has overwhelmingly focused on party affiliation and voting preference when studying Latinxs, rather than focusing on motivations to vote. As such, the focus of the current study are influences on voting behavior in young Latinx US citizens.

### **Latinx Voting**

Although a great deal of psychological research has been conducted examining voting behaviors and motivations in the general US population, study of the specific motivators of Latinx citizens is relatively new (Jackson, 2011; Leighley, 2014). Johnson Stein, and Wrinkle (2003) found that Latinos who spoke Spanish primarily were more likely to vote than those who primarily spoke English. White (2016) found that Latino communities that came under threat of deportation showed higher rates of voting than they did prior to coming under threat, indicating a social process by which the

communities become more aware of their role in combatting social oppression through political action. Humphries, Muller, and Schiller (2013) unlike White adolescents, whose rates of voter registration were predicted by their parents' educational status, Latino adolescents' voter registration likelihood was predicted by history of taking high level academic courses. These studies indicate that increasing voter motivation and behavior in Latinx citizens may involve different interventions than those currently used for the broader US community.

### **Health Outcomes of Political Engagement**

Few studies have examined the links between an individual's physical health and their political engagement, though the subject is gaining more attention (Denny & Doyle, 2007; Mattila et al., 2018; Ojeda & Pacheco, 2017; Pacheco & Fletcher, 2015). This connection has largely developed in recent years as the recognition of health disparity as a manifestation of social inequity has grown in research (Mattila et al., 2018). Further, the majority of research connecting the two concepts has examined the effect of health status on political engagement, but the direction(s) of the relationship between the two constructs remains unclear (Mattila et al., 2018). Participants from 25 European countries who voted in a local or national election in the past 12 months endorsed higher overall life satisfaction than those who did not vote during the same period (Lang & Pacheco, 2010). Blakely, Kennedy, and Kawachi (2001) found that people living in states with high levels of voting inequality and relatively low rates of voting were more likely to endorse poorer quality of health, even after controlling for the effect of average state income. In a sample of over 20,000 Canadian citizens, participants with physical health problems were less likely to vote in national elections (Couture & Breux, 2017). In a US

nationwide longitudinal study, self-reported health was closely tied to voting turnout and that people with higher self-reported health were more likely to vote (Pacheco & Fletcher, 2015). In a European sample, participants who reported poor health were less likely to vote (Mattila et al., 2013).

There is more research available on the impact of voting and political behavior on mental health, though this remains a relatively new topic of study (Ballard et al., 2018; Low, 2011; Wray-Lake et al., 2019). In a sample of 1400 college students, civic engagement was one of the strongest predictors of positive mental health, both at the time of measurement and in one-year follow-up (Fink, 2014). Similarly, among 428 college students, students who were found to show high levels of flourishing were more likely to rank civic engagement as important than languishing students (Low, 2011). Ojeda (2015) found that among potential voters with depression, those with more severe depression symptoms were less likely to vote. Adolescents who show high levels of civic engagement are less likely to be depressed in adulthood (Wray-Lake et al., 2019). In a longitudinal study of nearly 9000 young adults, Ojeda and Pacheco (2017) found that higher levels of depression predicted lower rates of voting, which in turn predicted higher rates of depression. Voting behavior has been associated with fewer depressive symptoms and fewer risky health decisions, but very little research has been carried out examining connections between voting behavior and positive health outcomes (Ballard et al., 2018). Feeling that they had an influence over political systems they were a part of through advocacy and voting made Latina mothers feel that they could improve healthcare access for themselves and others in the Latino community (Decamp et al., 2015).

While there is a growing body of literature linking political engagement to positive mental health outcomes, some evidence suggests otherwise. In a sample of 963 Australians, higher level of political engagement, such as discourse and protest, were associated with higher levels of perceived distress (Berry, Rodgers, & Dear, 2007). Similarly, a negative bi-directional relationship between mental health and political participation has been found longitudinally among a sample of Australians (Ding et al., 2015). Generally, higher levels of political engagement, including voting, appear to be connected to better health, though the connection between the two remains unclear. As such, more evidence is needed to help elucidate the potential connection between these two concepts.

Voting is associated with a variety of positive outcomes, both in its ability to impact policy affecting a given population, as well as health outcomes within an individual. As such, Latinx's relative lack of voting behavior is a troubling trend, given disproportionate representation in government (Jin, 2019), current policy negatively targeting the population (Branton et al., 2011), and the problematic relative health outcomes in the community (Vega et al., 2009). Given the many problems associated with not voting, the current study aims to examine the mechanisms of Latinx voter turnout.

### **Critical Consciousness**

One framework for understanding the relationship between voting and mental health among Latinxs is *critical consciousness* (Freire, 1971). Critical consciousness is defined as “how oppressed or marginalized people learn to critically analyze their social conditions and act to change them” (Watts et al., 2011a, p. 44). Critical consciousness is

composed of three components: critical reflection; political efficacy; critical action (Watts et al., 2011). Critical reflection refers to a critical analysis of structural inequity that perpetuates oppression (Diemer & Li, 2011; Freire, 1971). Critical action refers to individual or collective action taken to change unjust or oppressive aspects of society (Diemer et al., 2015; Watts et al., 2011a). Developing critical consciousness in adolescence has been shown to increase overall political engagement, including voting likelihood, in adolescence and adulthood (Diemer & Li, 2011; Diemer & Rapa, 2016). Critical consciousness has been associated a variety of positive supports of mental health, including occupational attainment, school success, community engagement, and social-emotional functioning among oppressed populations (Heberle et al., 2020). Critical consciousness thus provides a means of connecting internal mental health outcomes to engagement in political behaviors, such as voting.

### **Literature Review Parameters**

For the following literature review, I used PsycNET and The Psychology & Behavioral Sciences Collection linked to my university library search engine. In all sections, I also included frequently-cited books and articles based on readings from the above-described search. Articles focused on voter decisions or candidate preferences were excluded, rather, I selected articles addressing whether or not individuals participated in voting or registered to vote

For studies on US Latinx voting, I searched for peer-reviewed articles containing the truncated terms *latin\** and *vot\** in their abstracts, published in English since 2009 (n = 24). Of these, 2 were repeated results, and 18 studied topics irrelevant to the current study, such as partisanship. This yielded 4 results. As such, the search for this subject was

expanded to references made in these sources. Two books were also included containing these terms in their titles.

For political efficacy, I searched for peer-reviewed articles containing the truncated terms *politcal\** and *efficac\** in their abstracts, published in English since 2009 (n = 201). Of these, 109 of them did not have the combined terms (focusing on other types of efficacy), 10 were repeated entries, and another 56 were on topics irrelevant to the current study, such as its impacts in non-political domains. This yielded 26 studies included in the current review. Two books were also included through searching for these terms in their titles. Searching for the terms *latin\** and “*political efficacy*” in abstracts yielded 7 articles with the same parameters. Of these, 3 were irrelevant to the current study, yielding 4 for the current review.

A search for peer-reviewed articles containing the full terms “*social cognitive theory*” in any field and “*political efficacy*” in abstracts, published in English since 2009 yielded a combined 8 articles. Of these, 3 of were repeated results, and another 2 were on subjects outside the scope of the current study, yielding 3 usable studies. References from these three studies were included in the current review.

### **Explanations of Voter Turnout**

Although theorists have attempted to explain trends in whether or not US citizens vote since before the 1920’s (Mills et al., 1925), researchers continue to disagree over which frameworks are the most valid in explaining the behavior (Fraga, 2018; Harder & Krosnick, 2008; King & Hale, 2016; Lewis-Beck et al., 2008; Stempel & Hargrove, 2016). Behaviors regarding political engagement are complex and require multidisciplinary perspectives to adequately understand (Lewis-Beck et al., 2008). Voter

turnout and political engagement are most prominently examined in political science, sociology, and psychology (Torney-Purta et al., 2010). As such, thoroughly reviewing the vast theories on political engagement and voting is well outside the bounds of the current review. Instead, this review examines some of the most influential theories and perspectives on voter turnout, focusing on how they can be utilized within a psychology framework. Some of the most popularly examined predictors of voter turnout regard demographics, access, and internal motivations (Carlin & Love, 2015; Fraga, 2018; Lewis-Beck et al., 2008). The current study includes a brief overview of some of the contributions from political science, sociology, and psychology in order to better understand the multifaceted nature by which voting and other political engagement behaviors are currently researched. Once the contributions of the three fields are considered, the theoretical framework of the current study is discussed with reference to evidence provided by the three fields of research.

### **Political Science and Voter Turnout**

Voter turnout is one of the most researched subjects in political science and the subject of voter turnout was initially studied in this field (Geys, 2006; Stockemer, 2017; Torney-Purta et al., 2010). The unit of analysis is ultimately broad in political science and focuses primarily on large-scale trends in communities and governmental systems (Bendor et al., 2011; Herron, 1996). This review examines three established theories of voter turnout from political science, as well as political science's study of demographic differences in voter turnout and describe some of the most commonly collected data in the field.

**Downs's rational choice theory.** No discussion of voter turnout would be complete without first examining *rational choice theory*. Many authors (Andersen et al., 2014; Bendor et al., 2011; Fraga, 2018; Harder & Krosnick, 2008; Leighley, 2014) point to Downs's (1957) *rational choice theory* as the seminal work in the field of voter motivation and has been the foundation by which many sociological, political science, and psychological studies have examined voter turnout. This model is fundamentally based in a cost-benefit analysis of whether voting behavior is worth costs associated with it. Within this theory, likelihood to vote (R) is a combination of the voter's perception that their vote will influence the electoral outcome (P), the benefit a voter believes will occur if their side/candidate wins (B), the voter's perceived costs of voting such as time commitment (C), and the individual's sense of civic responsibility or duty (D). This equation was expressed as the equation  $R = PB - C + D$ . While this equation is seen as foundational to voter motivation studies, it has largely been replaced by more nuanced models for two reasons. First, the equation drastically underestimates voter motivation, as very few people expect their vote to have an influence over a national US election, yet hundreds of millions continue to vote (ANES, 2017). Second, Downs's account assumes a purely rational explanation of voting, precluding influences such as voting to support a candidate for their charisma or party, rather than policy benefits to the voter (Bendor et al., 2011; Cottam, 2010; Verba & Nie, 1993).

**Bounded rationality.** As Bendor and colleagues (2011) point out, rational choice theories have flourished in a variety of fields, but have been increasingly subsumed by theories considering psychological influences, such as behavioral economics, behavioral finance, and behavioral game theory. As such, Bendor and colleagues (2011) propose a



new model considering that voter turnout for an individual is a process both of navigating the cost-benefit analyses proposed by Downs (1957), while simultaneously considering the internal psychological states of an individual, especially regarding behavioral reinforcement. *Bounded rationality theory* is based on three claims: 1) individuals' abilities to make rational choices regarding their behavior is limited; 2) these constraints affect behavior; 3) the more difficult the task, the more limited rationality becomes in a decision-making context. Further, this model assumes that behaviors which are successful in bringing about desired outcomes are reinforced, while behaviors do not bring about desired outcomes are extinguished over time. When testing this theory, regardless of whether voter turnout starts out very high or very low, turnout eventually settled at roughly 50%, a low, but mostly accurate representation of a typical US election. Further, populations with high costs of voting will tend to vote at lower rates (roughly 47%) than populations with lower costs of voting (roughly 52%). This approximation of the disparity between White and minority voters underestimates the true disparity.

Bounded rationality is not designed to examine reasons for which an individual votes; instead, it estimates the basic parameters around which one can predict population-wide rates and trends. As such, it can be useful in examining the macrosystemic influences on group voter turnout. Within the context of its design, however, it does have weaknesses. It, like rational choice models, underestimates overall voter turnout, as well as fails to explain discrepancies between populations with unequal costs of voting.

**Life-cycle theory.** Another competing political science model explaining voting turnout is the *life-cycle theory* (Milbrath, 1965). From this perspective, younger eligible voters are less likely to vote because they prioritize work and family life over political

engagement. They are more likely to become engaged in political acts such as voting as they become more invested in their communities in middle-age but become less engaged later in life. Ruedin (2007) showed that this framework continues to hold viability but shows that social capital and connection to community are more salient predictors of voting participation than age. This focus on the development of connection and capital led to the development of *life-experience theory* (Rosenstone, 1993), based on life cycle theory. Through the lens of life-experience theory, exposure and familiarity with politics, politically mobilizing agents, and the agentic power of voting are influential of voting outcomes and increase with age. These theories explain why young adults are much less likely to vote than older adults, addressing a critical piece of the current study. This fails to address, however, why Latinx voters are also least likely to vote of any ethnicity by age group (United States Census Bureau, 2017).

**Demographics.** One of political science's greatest focuses in the area of voter behavior are turnout differences between demographic groups (Geys, 2006; Stockemer, 2017). While these analyses do not provide direct means of intervention, they are significant in identifying which populations are most impacted by potential interventions (Gerber et al., 2008). The demographic categories most studied in political science regarding voter turnout are gender, race/ethnicity, age, and educational attainment (Geys, 2006). One demographic category also of very high import when examining Latinx voter turnout is immigration status, as there are a variety of behavioral and cultural differences demonstrated by US-born citizens and naturalized citizens (Adames & Chavez-Dueñas, 2017; Carlin & Love, 2015; White, 2016).

***Race and ethnicity.*** As discussed above, there are significant differences between likelihood to vote by race and ethnicity (Leighley, 2014; Lewis-Beck et al., 2008; Stempel & Hargrove, 2016; United States Census Bureau, 2017). As many writers point out, however, research on why ethno-racial minorities differ from Whites in terms of voter turnout is relatively new, as research on the subject has historically viewed the US electorate as a homogenous group (Fraga, 2018; Kreider & Baldino, 2016; Stempel & Hargrove, 2016). Further, the ethno-racially focused turnout research that exists typically lumps many ethno-racial groups together to compare against White voters (Fraga, 2018). As such, there is a relatively small amount of research into the barriers and motivators specifically salient to Latinxs. For the purpose of this review, I examine some of the demographic influences on voting associated with education, age, gender, and citizenship status.

***Gender.*** In 1980, women in the US showed a higher rate of voter turnout than men, and the disparity between the two groups has grown every national election since (*Gender Differences in Voter Turnout*, 2019). The discrepancy between men and women's voting turnout tends to be strongest among young voters age 18-24 (Hartig, 2019). Among young adult Latinxs, however, this discrepancy is especially stark. Among adults age 18-24, 40.7% of female Hispanics reported in the 2016 election, compared to only 27.9% of males (United States Census Bureau, 2017).

***Education.*** Education level has been shown to be closely associated with likelihood to vote. In 2016, 34.3% of US citizens without a high school diploma or equivalent degree voted, compared to 59.9% of citizens with at least a high school diploma (United States Census Bureau, 2017). This discrepancy continued at higher

levels of education, as 54.4% of citizens without a college degree voted, compared to 76.3% of citizens with at least a 4-year college degree (United States Census Bureau, 2017). These discrepancies remain after controlling for a variety of across a host of other demographic categories, including age, gender, and race/ethnicity (Leighley, 2014; Li et al., 2018; United States Census Bureau, 2017). Interestingly, the effect of education on likelihood to vote does not appear to have to same impact on Latinxs, as Latinxs without a high school diploma are actually more likely to vote than their White counterparts (Fraga, 2018).

**Age.** In the US, citizens are eligible to vote once they turn 18 years old and rates of voter turnout tend to increase over an individual's lifetime, with 18-24 year-olds being least likely to vote, and people 60 or older most likely to vote (Leighley, 2014; Stockemer, 2017). In the 2016 election, 43.0% of US citizens age 18-24 voted, while 72.6% of citizens age 65-74 voted (United States Census Bureau, 2017). Among Latinxs, there is an especially stark discrepancy by age; in 2016 34.3% of citizens age 18-24 voted, compared to 59.0% age 65-74 (United States Census Bureau, 2017). This discrepancy is especially stark once considering differences by gender, as 27.9% of Latino men age 18-24 voted, compared to 64.8% of their age 65-74 counterparts (United States Census Bureau, 2017).

**Citizenship status.** In samples of US citizens, naturalized citizens tend to vote significantly less than their US-born counterparts (Leighley, 2014; Stempel & Hargrove, 2016). For instance, in the 2016 national election, 62.1% of US-born citizens voted, compared to 54.3% of naturalized citizens (United States Census Bureau, 2017). Among Latinxs, however, this trend reverses, with 53.4% of naturalized citizens voting in the

2016 national election, compared to only 45.5% of US-born Latinxs (United States Census Bureau, 2017). This phenomenon also appears among Asian populations (Leighley, 2014; United States Census Bureau, 2017).

Clearly, demographic categories are associated with voter turnout rates. Though demographic categories do not serve as points of intervention, they can serve as indicators of where intervention can be most effective. Of the many groups and subgroups examined, it appears that among Latinxs, young US-born men tend to be least likely to vote and may be of special focus as a target of future intervention. This specific focus is considered in the proposed model explaining young Latinx voter turnout and is augmented through examining other predictors and influences on voting behaviors.

### **Sociological Explanations of Voting Behavior**

Sociology also offers a broad analysis of human interaction, focusing on cultural, and social structural points of influence (Herron, 1996). Politically-oriented sociology differs from political science in that it focuses on power, ideology, and participation (Kourvetaris & Dobratz, 1980). While political science focuses on government and the role of people within it, sociology examines the interaction between the state and society (Nash, 2000). Generally, sociological theorists approach politics and political participation through functionalist (arguing that systems bring themselves into harmony over time as manifested through social structures), conflict (arguing that competition over mutually needed goods keeps a society together and creates social structures), and class (beliefs that those with more power utilize social structures to reinforce their own power and take it from those with less; Kourvetaris & Dobratz, 1980). In all three of these perspectives, voting is seen as a form of power, giving groups of individuals influence

over the structure and actions of the state (Kourvetaris & Dobratz, 1980; Nash, 2000). Through this perspective, one of the main areas of study regarding voting and political participation is access to voting (Piven & Cloward, 2005).

**Access.** There are a variety of access barriers which suppress Latinx voting in the US. While strict voter identification laws do not have a significant effect on overall US voters' likelihood to vote, they do significantly decrease Asian, Black, and Hispanic turnout (Hajnal et al., 2017). Further, the discrepancy between Hispanic and White voters nearly doubles when strict identification laws are put in place (Hajnal et al., 2017). Although 73% of Latinos report speaking Spanish at home (Krogstad & Lopez, 2017), only 34% of the US population lives in a county that provides access to ballots in any language other than English (Cohn, 2016). Southwell (2010) showed that Latinos were much more likely to participate in voting when they could vote through the mail, as opposed to voting in person, yet only three states hold their elections primarily through the mail. Gerrymandered districts serve to decrease the overall effectiveness of minority votes, including Latinos (Barnes, 2018; Kreider & Baldino, 2016). Many writers point out that many of these institutionally-controlled access elements are implemented specifically to discourage minority citizens from voting and affecting elections (Alexander, 2010; C. E. Anderson, 2018; Fraga, 2018).

**Cost of voting.** Levels of access for national elections vary from state to state. Given our population of focus, it is worth noting that states with larger Latino populations are more likely to pass restrictive voter laws than states with smaller Latino populations (Avery et al., 2017). Li, Pomante, and Schraufnagel (2018) recently analyzed the relative cost of voting in all 50 states. The authors examined 33 different institutional

arrangements, such as voter registration deadlines, registration restrictions, restrictions placed on registration drives, preregistration laws, overall inconvenience of voting, voter identification laws, and poll availability hours. Li and colleagues (2018) then assigned a Cost Of Voting Index (COVI) score to each state based on these 33 arrangements. The standardized scores ranged from a low COVI of -2.061 (Oregon, representing relative ease of voting) to a high COVI of 1.302 (Mississippi, representing many structural barriers to voting). A score above 0 indicates more structural barriers to voting than the average state and a score below 0 indicates fewer barriers (Li et al., 2018). Li and colleagues (2018) found that living in a state with a COVI score difference of .4 (one standard deviation) was associated with 5% lower voter turnout, and that individuals who lived in states with higher COVI scores reported being less likely to vote.

Of the five states with the highest percentage of Latinx citizens (New Mexico, Texas, California, Arizona, and Nevada), only one had a COVI less than 0 in the 2016 election. Clearly, there are many accessibility issues hampering Latinx voter turnout rates. There are, however, indications that taking a primarily access-driven approach to addressing turnout would be incomplete in explaining low Latinx voter turnout. For instance, overall voter turnout in the US is generally lower than turnout rates in most other industrialized countries, despite having easier access to voting (Carlin & Love, 2015; King & Hale, 2016; Lewis-Beck et al., 2008). Additionally, voter turnout rates have not increased as voter registration and ballot-casting processes have become easier in the US (King & Hale, 2016; Leighley, 2014; Lewis-Beck et al., 2008). With specific regard to Latinx voters, there is evidence that turnout may be affected more by psychosocial influences than access. For instance, naturalized Latino immigrants were

45% more likely to vote than their US-born counterparts in 2014 (Pew Research Center, 2016), despite typically experiencing greater barriers to voting (King & Hale, 2016). These discrepancies indicate that there are likely individual psychological processes inhibiting voting behaviors in addition to those pertaining to social access. As such, examination of psychological influences which impact voting behavior may provide a valuable opportunity to increase voter turnout.

### **Psychological Explanations of Voting Behavior**

Unlike research in political science and sociology, political psychology focuses on individual's engagement in, interpretation of, and response to political stimuli (Deutsch & Kinnvall, 2002). Stone (1974) defines political behavior as "all of a person's activity that is directed toward cooperative solution of the problems of daily living" (p. 16). While this field is interdisciplinary and draws from the contributions of political science and sociology, its unit of analysis is ultimately individual behavior and how cultural, societal, or political change occurs through the actions and wills of individuals acting together (Hermann, 2002). Research in this area has a distinction of serving as the basis for developing interventions in order to address the many structural inequities uncovered by political science and sociology (Lane, 2002). Of interest are how political groups behave, the study of political leaders' psychological characteristics, how individuals make political decisions, how politics develop relative to identity factors, meanings and outcomes of group identities such as nationalism, and how people engage in politics through discourse, voting, and other forms of collective action (Cottam, 2010).

**The Michigan model.** Early psychological explanations of voter turnout and choice focused on the rationality and knowledge involved in making political decisions



(Cottam, 2010; Lewis-Beck et al., 2008; Verba & Nie, 1993). Campbell, Converse, and Stokes (1960) are credited with developing one of the most significant early studies in political psychology challenging earlier assumptions (Cottam, 2010; Deutsch & Kinnvall, 2002; Lewis-Beck et al., 2008). In this study, the authors found that, contrary to theoretical approaches of the time, most voters did not choose to vote or select candidates to support through rational decisions from well-informed knowledge of policy. Instead, only 2.5% of respondents could provide meaningful explanations of how candidates differed on policy issues and nearly a quarter of voters voted based on whether they thought their social situation was good or bad. Those viewing their situation as positive generally vote for incumbent parties, and those viewing their situation as negative generally did not vote or voted for non-incumbent parties (Campbell et al., 1960). In striking contrast to a rationalist perspective on democratic voting, 22.5% responded that they knew nothing about any specific policy decisions (Campbell et al., 1960). While respondents with higher levels of knowledge were more likely to vote, there was clearly more involved in voter turnout. In this study, the authors developed the Michigan model of voting, in which individuals develop political party affiliations first, which then leads them to develop political opinions and knowledge, which in turn affect their likelihood to vote, as well as the candidates for whom they vote (Campbell et al., 1960). The authors ultimately posited that while knowledge of policy and politics impacted likelihood to vote, it was an individual's identification with a specific party or candidate that was more influential.

**The Maximalist model.** In what is largely considered the most significant contemporary contrast to the Michigan model (Cottam, 2010; Lewis-Beck et al., 2008),

Lane (1962) posited that voting decisions were predicted by factors more complex than political affiliation and knowledge of specific policy issues. While the Michigan model worked from a largely cognitive perspective of identity and knowledge, the Maximalists argued that cognitive and affective reactions to policy issues values drove voter turnout and that these reactions reflected discrepancies in voters' individual values. Lane (1962) argued that people developed a series of political beliefs through ideologies, which then impacted their perspectives in domains of policy; these, in turn affected voting turnout, voter choice, and political affiliation. In examining evidence provided through research the Maximalist model, Verba and Nie (1993) point out that a multitude of issues are typically at stake in any given voting decision, and as such, having internal processes to quickly assimilate the relative costs and outcomes of voting are generally preferable to potential voters over examining every policy issue at stake. Lane (1962) ultimately concluded that it was an affective evaluation of specific political issues and their salience in an individual's life that ultimately determined whether or not the individual would choose to vote.

Since the development of these early theoretical foundational models of predictors of voter turnout, scholars in political psychology largely have agreed that likelihood to vote is determined by a wide variety of stimuli, including rational and irrational internal factors, environmental impacts, situational settings, consideration of the valuation of voting in the democratic process, and a host of other influences (Harder & Krosnick, 2008; King & Hale, 2016; Lewis-Beck et al., 2008; Verba & Nie, 1993). Harder and Krosnick (2008) reviewed available psychological studies examining predictors of voter turnout, and organized studies into issues relating to registration processes, demographic

differences in motivation and access, social pressures, specific election characteristics, and the effects of canvassing. Similarly, Smets and van Ham (2013) reviewed 90 individual-level studies of voter turnout, distributing studies into categories of focusing on resources, mobilization efforts, socialization, knowledge or rationality, and internal psychological factors. For the current review, I briefly examine psychological literature examining voter turnout in the domains of socioeconomic resources, access, mobilization efforts, social influences, and internal psychological processes.

**Resources.** Relative to voter turnout, two of the most commonly examined socioeconomic influences in political psychology are education and income (Brady et al., 1995; Smets & van Ham, 2013). As observed above, higher levels of education are consistently associated with higher voter turnout, however national voter turnout rates have not increased as levels of education have grown over time (Burden, 2009). In a meta-analysis of 67 studies examining associations between education and individual voter turnout, Smets and van Ham (2013) found that education had a significant relationship with voter turnout after accounting for other socioeconomic influences. In longitudinal studies, education has been found to predict voting likelihood immediately after completing formal education, as well as greater likelihood of voting throughout life (Sondheimer & Green, 2010). Income has also been significantly associated with likelihood of voting (Avery, 2015). In a meta-analysis of 40 studies, Smets and van Ham (2013) found that individuals with higher income were more likely to vote regardless of other socioeconomic factors. Wichowsky (2012) showed that while people with higher levels of income were more likely to vote than people with lower levels of income, the effect shrank during closer elections. These findings are not uniform, for all populations,

however. Humphries, Muller, and Schiller (2013) found that although White adolescents' rates of voter registration were predicted by their parents' educational status, the same effect did not exist for Latino adolescents. Latino adolescents' voter registration likelihood was predicted instead by their history of taking high level academic courses (Humphries et al., 2013).

**Access.** Psychological studies have shown a variety of means through which access impacts individuals' voter turnout. One of the ways access to voting is impacted by governmental actions is through voter registration deadlines. Examining longitudinal data over 24 years, Brians and Grofman (2001) estimated that the average US state would see a seven percent increase in voter turnout if the state enacted day-of-election registration compared to requiring voter registration 30 days before elections. The impact of this same-day registration is especially influential among individuals with high school education and those with middle incomes (Brians & Grofman, 2001). Another important factor in voting access is the availability of nearby polling places. Anticipated commute time and distance most negatively affect suburban community turnout, while rural community turnout is least affected, as anticipated and real commute times are less impacted by traffic (Gimpel & Schuknecht, 2003).

People with disabilities often face additional barriers to voting opportunities and are up to 20% less likely to vote than able-bodied citizens (Mattila & Papageorgiou, 2017; Schur et al., 2002). While people with spinal cord injuries (SCI) who were employed were as likely to vote as employed people without this disability, people with SCI's who were unemployed were significantly less likely to vote than able-bodied unemployed citizens (Schur & Kruse, 2000). Among people with SCI's, people who

could drive were significantly more likely to vote than those who could not (Schur & Kruse, 2000). Counties with higher percentages of African American populations tend to have fewer early voting polling stations (Fullmer, 2015). Clearly, general access and the access afforded specific populations has an impact on whether or not an individual votes.

**Mobilization efforts.** Mobilization refers to actions taken to increase voter turnout within a given population. Among a diverse population in New Jersey, people who received mail reminding them of an upcoming election and providing evidence of the importance of voting were 2% more likely to vote than people who did not (Panagopoulos, 2013). Further, this relationship was stronger among Hispanic and Black voters (Panagopoulos, 2013). Matland and Murray (2012) found that traditional get-out-the-vote techniques (door-to-door and mail reminders of registration and voting details) were effective in increasing rates of voting among low-propensity Latino voters. Latinos in New York were more likely to vote if they received postcards reminding them to vote, though postcards sent in English were associated with higher rates of voting in Latinos regardless of used language, while postcards sent in Spanish were only associated with increased voting among Spanish-speaking Latinos (Abrajano & Panagopoulos, 2011). This research indicates that wide-spread interventions are capable of increasing likelihood of voting.

**Social influences.** Feeling discriminated against or, in contrast, welcomed in a community appears to have a significant effect on likelihood of voting. People with disabilities who endorsed more experiences of discrimination were less likely to vote than those who endorsed fewer (Mattila & Papageorgiou, 2017). Latinos in California who received face-to-face canvassing from Latino undergraduates were 16% more likely to

vote (Michelson, 2003b). As noted earlier in this document, White (2016) found that Latino communities that came under threat of deportation showed higher rates of voting than they did prior to coming under threat, indicating a social process by which the communities become aware of their role in combatting social oppression through political action. Clearly, discriminatory experiences and feelings of communality may have an impact on voter turnout, though the direction of the relationship may vary.

**Internal processes.** The most commonly studied influences on voter turnout in political psychology are internal processes and states. Some of the most commonly researched internal influences of voting behavior include personality, duty, knowledge, and mental health.

**Personality.** Higher levels of voter turnout have been associated with personality factors, including extroversion and openness (Blais & St-Vincent, 2011; Gallego & Oberski, 2012; Mondak, 2010; Mondak & Halperin, 2008). The effect of personality on voting appears to be mediated by classical political psychology predictors, such as political interest, efficacy, political discussion, and a sense of civic duty (Gallego & Oberski, 2012). Further, personality effects appear to be mediated by gender; openness is associated with higher male turnout, but lower female turnout, while conscientiousness is associated with higher female turnout but not male turnout (Wang, 2014). Personality factors may also impact the effect of external factors on voting, as openness has positively mediated the relationship between get-out-the-vote campaign experience and voter turnout (Gerber et al., 2013).

**Values and duty.** As theorized within the Maximalist approach (Lane, 1962), voter values are also a significant predictor of likelihood of voting. Non-voters are less

likely to endorse the values espoused by either party than voters (Caprara et al., 2012). Blais and Rubenson (2013) found that young voters' values were less likely to be espoused in political races, which explained a significant amount of difference in their lower rates of voter turnout. Consistent with Maximalist and Downs' (1957) perspectives, a sense of civic duty has been found to have a positive impact on voter turnout. In a sample drawn from Taiwan, the US, and the United Kingdom, a greater sense of civic duty was associated with higher rates of voting, and duty mediated the relationship between trust in politics and voting (Wang, 2016). Civic duty and interest in election outcome appear to work together, and US citizens who did not endorse a high level of either were unlikely to vote compared to those who endorsed either or both (Blais & Achen, 2019). An individual's sense of civic duty in voting may not be unconditional; some voters' connection between civic duty and voting is mediated by whether they believe they know sufficient amounts about the issue being voted upon (Goodman, 2018). Further, civic duty appears to have a stronger influence over voting likelihood among undecided voters (Kosmidis, 2014). Notably, Blais, Galais, and Mayer (2019) found that perceived duty to vote was significantly more pervasive than duty to be politically informed. Further, a lower sense of duty to vote has been associated with low interest in politics, low political efficacy, and low opinion of candidates (Bowler & Donovan, 2013).

***Knowledge.*** Supporting older models, political knowledge has been shown to be connected to higher levels of voter turnout. Knowledge of political issues was associated with higher turnout, and was not correlated with income after accounting for level of education in a South Korean sample (Jo et al., 2017). US voters who are exposed to less

local coverage of elections are less likely to provide evaluations of their congresspeople and are less likely to vote in elections (Hayes & Lawless, 2015). Similarly, citizens exposed to more media on elections had more knowledge of candidates and issues, and showed higher rates of voting (An et al., 2006). In a British sample, Larcinese (2007) found that knowledge of political issues was associated with turnout, and was largely associated with mass media exposure. Finally, in a sample of 31 democratic countries, knowledge of political issues was associated with higher voter turnout on average, but the association was not present in countries experiencing higher levels of overt political corruption (Agerberg, 2019). Motivation to develop political knowledge is largely attributed to political socialization, or the ways that individuals are taught to value and evaluate political information (Torney-Purta et al., 2010; Verhaegen & Boonen, 2018). Some of the most studied political socializing agents are parents, schools, and media forces, especially television (Hadar-Shoval & Alon-Tirosh, 2019; Verhaegen & Boonen, 2018).

***Mental health.*** A growing body of literature shows that negative states associated with mental illness can have a negative impact on voter turnout. Couture and Breux (2017) found that participants who endorsed one or more mental health concerns were less likely to vote in local elections. Political engagement activities show a bi-directional relationship with depressive symptoms developmentally; adolescents who show high levels of civic engagement are less likely to be depressed in adulthood and more depressed adults are less likely to engage politically, including though voting (Wray-Lake et al., 2019). Similarly, individuals experiencing depression are less likely to vote (Ojeda & Slaughter, 2019). This relationship is reciprocal; higher levels of depression predict



lower rates of voting, which in turn predicts higher rates of depression later in life (Ojeda & Pacheco, 2017).

In sum, a variety of internal and external influences on likelihood to vote have been examined within political psychology literature. Among these are socioeconomic resources, relative levels of access, levels of political knowledge, beliefs about perceived duty to vote, and mental illness. Previous literature predicts voting behavior within theoretical frameworks including rational choice theory (Blais & Achen, 2019; Goodman, 2018; Kosmidis, 2014), life cycle theory (Milbrath, 1965), the Michigan model (An et al., 2006; Jo et al., 2017; Larcinese, 2007), and resource models (Avery, 2015; Burden, 2009; Sondheimer & Green, 2010). Smets and van Ham (2013) point out, however, a great deal of research on the subject is not explicitly linked to theory, making it difficult to compare theoretical plausibility.

### **Theoretical Considerations**

Clearly, influences on likelihood to vote come from both internal and external domains. Given that available literature points to such a diverse group of influences of voting behavior, a theoretical approach that recognizes internal and external predictors of behavior is needed

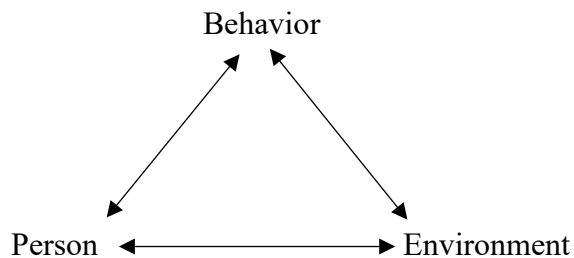
(Darmofal, 2010; Niemi et al., 1991; Torney-Purta et al., 2010). Social Cognitive Theory (SCT; Bandura 1986; 2001) is a particularly useful framework for examining voting behavior, as it focuses on the reciprocal nature of internal states, behavior, and environments (Lent & Maddux, 1997). In the following pages, I briefly describe social cognitive theory, as well as examine existing literature explaining voter turnout through a social cognitive lens.

## Social Cognitive Theory

Drawing from Psychoanalytic Theory, Trait Theory, Radical Behaviorism, and Social Learning Theory, Social Cognitive Theory (Bandura, 1986; 2001) is a learning model that posits human behavior is explained through a tripartite model consisting of bidirectional effects between an individual's personal state, environment, and behaviors. Personal state factors include cognitive, affective, and physical states and attributes. Environmental factors include external influences which help or hinder an individual in engaging or completing the behavior. Behavioral factors are the knowledge and skill needed to complete a given behavior. Each of the three factors are simultaneously influenced and influence the other two (see figure 1).

**Figure 1.**

Bandura's Triadic Reciprocity Model



A key element of Bandura's SCT is the notion of human agency. Bandura (2001) defined agency as intentional action. SCT posits that humans are agentic, and as such proactively self-develop, self-regulate, and self-reflect in response to external influences (Bandura, 1986). As such, individuals and their behaviors are not simply products of their environment. Further, Bandura (2000) posited that agency cannot only be viewed from an individualistic perspective, as many goals are only achievable through interdependence with others. For instance, the act of voting is understood within a broader context of

politics, in which people believe that others will vote similarly to them with the aim of electing a candidate or enacting policy.

As such, the SCT framework can be used to examine determinants of an individual's behavior as well as the complex means by which collective groups behave, including through voting behavior. SCT provides a useful structure for investigating the mechanisms underlying political engagement and voting behavior, providing avenues of examining internal and external influences. Given the complex nature of political engagement, approaches considering environmental, affective, cognitive, and social influences are all necessary to understand the phenomenon (Lewis-Beck et al., 2008). The current study applies Bandura's SCT model to voting among Latinxs. In the following pages, I further examine SCT as well as review literature on voting behavior in the three SCT domains of person, environment and behavior.

### **Personal Factors**

Within Bandura's (1986) tripartite framework, personal factors represent the internal cognitive, affective, and physical processes of the individual. The three critical components of personal influences are self-efficacy, outcome expectations, and physiological states.

**Self-efficacy expectations.** Within SCT, Bandura (1986; 2001) conceptualized self-efficacy as the foundation of agentic action. Bandura (1986) defined self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391). The construct is domain specific and does not generalize across different unrelated behaviors. For example, having high self-efficacy for presenting at scientific conferences does not imply that an

individual also has high self-efficacy for playing a musical instrument. Self-efficacy is built through four sources: vicarious experience, social persuasion, enactive attainment, and states of physiology (Bandura, 2008). Mastery experiences relate to an individual's experience of attempting realistic but challenging tasks relating to the behavior. Vicarious experience is having observed another person similar to the individual succeed in the behavior. Social persuasion refers to others' expressed belief in the individual's ability to successfully carry out the behavior. Finally, physiological states are the moment-to-moment affective and physical states that may influence the individual's belief in their ability to successfully engage in the behavior (i.e. depression, anxiety, or the flu; Bandura, 2008). In the case of voting behavior, voting self-efficacy (hereafter referred to as VSE) should therefore be enhanced by seeing peers or role models successfully vote (vicarious experience), experiencing social encouragement to vote or hearing information on the process (social persuasion), successfully voting or registering to vote (mastery experiences or enactive attainment), and being of sufficient physical and mental health to go to polling places to vote (physiology).

During my search of the literature, I included the terms "voting self-efficacy" and "voter self-efficacy." The search resulted in a total of nine results, of which only eight contained "voter/voting" and "self-efficacy" in separate phrases (i.e. all discussed voting and self-efficacy, but none included "voter self-efficacy"). The one remaining study (Hennessy et al., 2015) described voting self-efficacy, but explicitly excluded this variable from the study. I was unable to locate any existing measure of voting self-efficacy. I return to this gap in the literature at the close of this chapter.

Similar to the necessity of self-efficacy in an individual's action, Bandura (2000) posited that collective efficacy was key in the expression of collective agency. Bandura (2000) described collective agency as "people's shared beliefs in their collective power to produce desired results" (p. 75). This provides an important insight in addressing the greatest criticism of Downs's (1957) economic model of voting, that the likelihood of an individual's vote being decisive in a large election are so small that they are almost always outweighed by any level of cost. From a collective efficacy perspective, however, an individual is not under the impression that their vote will be decisive in an election; instead, they recognize that if they and many others vote together, they can be influential.

***Enactive attainment.*** Bandura (1986) posited that the most influential mechanism of developing self-efficacy was enactive attainment. Enactive attainment (also referred to as performance accomplishments) represents attempts at engaging in the outcome behavior, with successes raising a sense of self-efficacy and failures lowering them (Bandura, 1986). Though I was unable to find literature showing increases in self-efficacy after voting, previous voting has been associated with increases in voting likelihood. Among US citizens who voted in the 2000 election, 92% voted in 2004; among citizens who did not vote in 2000, only 45% voted in 2004 (American National Election Studies; ANES, 2017). Further, citizens who have not regularly voted in previous elections lose motivation to vote when primed to think about other life stressors, whereas habitual voters motivations are unaffected by the same stressors (Hassell & Settle, 2017).

***Physiological factors.*** Bandura posited that physiological states were mechanisms in the development of self-efficacy (1977, 1982) and simultaneously influential over the

individual's interaction with the environment (1986). Regarding their impact on self-efficacy, Bandura posited that individuals gathered information about their ability to succeed in a behavior by their physiological activation, which in turn impacted their perceived self-efficacy (1982). An example of this would be an individual feeling anxious about a writing assignment and, through recognizing her own anxiety, felt less sure of herself as a writer. Bandura (1986) also points out that physiological states directly impact an individual's engagement in behavior beyond through self-efficacy. An example of this is an individual so anxious that they are unable to engage in the process of writing. The physiological state most commonly researched relative to voting likelihood is depression. Experiencing depression is associated with decreased political engagement and voting (Ojeda & Pacheco, 2017; Ojeda & Slaughter, 2019; Wray-Lake et al., 2019). According to Bandura (1986), experiencing symptoms of depression is associated with problems associated with performance appraisal, social comparison, and perceived control. In a voting context, depression as a physiological factor is expected to hinder the development of political self-efficacy and would be associated with lower likelihood to vote.

***Vicarious experience.*** Another of the mechanisms of self-efficacy development is vicarious experience (Bandura, 1982, 1986). Vicarious experience is the act of seeing or visualizing someone similar to the individual successfully carry out the behavior. The greatest source of vicarious experience developing young adults experience regarding voting behavior is through their parents (Bhatti & Hansen, 2012; Pacheco & Plutzer, 2007; Plutzer, 2002). Utilizing extant data on 3900 US citizens, Plutzer (2002) found parent voting behavior to be the most influential family aspect predicting child voting

behavior later in life. In a 12-year study following 12,000 middle schoolers, parental voting behavior was a significant predictor of later-life child voting for White and Hispanic participants (Pacheco & Plutzer, 2007). This relationship was stronger when parents engaged in voting earlier in the child's life (Pacheco & Plutzer, 2007). Bhatti and Hansen (2012) found that first-time eligible voters in Denmark were significantly impacted by the voting behavior of their parents, with participants whose parents did not regularly vote being least likely to vote and participants with to voting parents most likely to vote. This relationship remained after accounting for socioeconomics and the relationship was strongest for participants who had left home at the time of the survey (Bhatti & Hansen, 2012).

***Political efficacy and voting behavior.*** Although voting self-efficacy has not been directly investigated, One domain of self-efficacy that has been specifically studied in relation to voting is political self-efficacy<sup>2</sup> (Caprara et al., 2009; Vecchione et al., 2014). In the foundational text on the subject, Campbell (1954) defined political efficacy as an individual's belief that they can impact the political process in a meaningful way. Since then, researchers and theorists have expanded upon this conception. Lane (1965) proposed two types of political efficacy: internal and external. Internal political efficacy refers to one's believed competence to understand and participate in politics, such as meaningfully understanding political matters and engaging in debate or making an informed vote, closely aligned with Bandura's (1986) concept of self-efficacy. External political efficacy refers to beliefs that governmental systems are responsive to citizen

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<sup>2</sup> A careful review of the literature on the constructs of political efficacy and political self-efficacy reveals inconsistency in terms of definitions and in fact, incongruence between the construct and how it was measured.

demands and that the efforts of advocacy and the electoral process, more closely aligned with Bandura's concept of outcome expectations. In the decades since, the two concepts of political efficacy have been studied in association with a variety of political behaviors and measurement of the constructs has improved regarding validity and reliability (Niemi et al., 1991; Schneider et al., 2014).

***Internal political efficacy.*** Research consistently demonstrates a positive connection between internal political efficacy (IPE) and various types of political engagement, including voting and intent to vote. In a sample of 12,000 Chinese citizens, responses indicated that higher IPE was associated with higher collective political engagement through protest (Zeng et al., 2018). In a longitudinal study of Black and Latino college students, participants who showed high IPE at the beginning of college were more likely to engage in a variety of political behaviors throughout their time as a college student (Hope et al., 2016). In a sample of over 400 German young adults, IPE positively predicted political engagement at 6- and 12-month follow up (Eckstein et al., 2013). Female college students show lower IPE than males (Centellas & Rosenblatt, 2018).

A positive relationship has also been found between IPE and voting behaviors. Among 16-25 year-olds in the European Union, participants were more likely to plan to vote in their next national election if they were categorized as having high IPE (Strohmeier et al., 2017). In a Dutch sample of young adults, both high starting IPE and increases in IPE predicted higher rates of voting at 6-month follow-up (Moeller et al., 2014). In a sample of 3400 US citizens between ages 25 and 75, IPE was significantly associated with intention to vote in the following election (Littvay et al., 2011).



**Outcome expectations.** Another component of personal factors is Bandura's (1986) concept of outcome expectations, the results an individual expects as a consequence of an action (Bandura, 2001; Fouad & Guillen, 2006). Bandura (1986) posited that outcome expectations are developed through outcomes the individual has directly experienced from previous attempts at the behavior, through observing the consequences of another attempting the behavior, or information gathered through social interactions about the behavior. Outcome expectations salient to the present study would include expectations that voting would lead to, for example, the election of a preferred candidate, passage of a measure, or a difference in subsequent policies, practices, laws. Other outcome expectations could include a sense of pride in completing a perceived civic duty.

***External political efficacy.*** External political efficacy (EPE) refers to people's belief that political action has an impact on the actions of government and policymakers (Lane, 1965). As such, it is more aligned with Bandura's concept of outcome expectations. This concept has consistently shown a positive relationship with engagement in political behavior. Among Egyptians citizens experiencing the 2013 coup, EPE moderated the relationship between perceived risk and protest, such that those with high external political efficacy were likely to engage in protest, regardless of perceived risk (Ayanian & Tausch, 2016). In a sample of 634 Black youth ages 15–25, EPE was associated with higher levels of civic engagement (Hope & Jagers, 2014). There is less literature linking EPE to voting than there is for IPE. In an international study of over 67,000 citizens from 36 countries, EPE was found to have a significant positive relationship with an individual's likelihood to vote, including in countries where voting is

compulsory (Singh, 2011). In a German sample, IPE and EPE mediated the association between personality traits such as openness and agreeableness and voting likelihood (Schoen & Steinbrecher, 2013). This finding was also found among Spanish citizens (Gallego & Oberski, 2012).

***Political self-efficacy.*** Integrating Bandura's perspective on self-efficacy and the existing concept of political efficacy, political self-efficacy (PSE) is "individuals' beliefs in their capabilities to engage actively in political activities" (Caprara et al., 2009, p. 1006). This definition covers both the individual's perception of their ability to take part in the act of voting, as well as that process's impact over systems, encompassing both the concepts of self-efficacy and outcome expectations. This perspective is accommodating of the fact that individuals must engage in Bandura's concept of collective agency in order to affect an election (Bandura, 2000; Caprara et al., 2009). Political self-efficacy has been associated with higher political engagement behaviors (Leath & Chavous, 2017; Vecchione et al., 2014). Further, political efficacy is a core component of critical consciousness (Watts et al., 2011a), which is associated with a broad set of positive outcomes, including occupational attainment, school success, community engagement, and social-emotional functioning (Heberle et al., 2020)

### **Behavioral Factors**

Bandura (1986; 2008) posited that whenever humans are engaged in behaviors, they receive positive, negative, or neutral feedback regarding the success of their behavior in achieving the desired outcome; similarly, the behaviors exhibited serve as means of impacting the person's environment. Bandura (1986) emphasizes that these behavioral factors are not solely the outcomes of interactions between the environment

and person; rather they are a unique set of mechanisms through which the person and environment are both affected. An example of bidirectionality between the environment and behavior is when an individual encounters a line at a polling station. Regarding behavior affecting the environment, a large number of people staying in line at a polling place may serve as a sign to local government agencies that more polling places should be open in the following election, thus impacting the voting environment in the future. Bidirectionality between the person and behavior would be represented by the process of registering to vote. Successfully registering to vote would be expected to increase an individual's self-efficacy in the behavior. Reciprocally, higher self-efficacy would be associated with higher rates of voting in a future election. From this perspective, past behavior has an impact on current/future behavior, but it occurs through the process of past behavior affecting self-efficacy.

**Behavioral factors and voting.** I was unable to locate any research on the impact of previous voting behavior on voting self-efficacy. While literature overwhelmingly supports a connection between likelihood to vote and previous voting, the strength of the relationship remains unclear. Some longitudinal studies have estimated previous voting behavior to make up more than 40% of the variance in whether or not someone votes in the future (Gerber et al., 2003; Green & Shachar, 2000). However, in a longitudinal sample of over 10,000 British citizens, previous voting behavior was found to increase the likelihood of voting in a later election by 13% after controlling for socioeconomic, identity, and psychological variables (Denny & Doyle, 2009). This lends support for the process by which voting behavior reinforces an individual's later voting, though the mechanisms by which this occurs needs further examination.

## **Environmental Factors**

Bandura (1986) proposed a broad conception of potential environmental factors, which included physical environments, interpersonal dynamics, and broader sociocultural contexts as demonstrated in three gradients: imposed environments, selected environments, and constructed environments (Bandura, 1997). These three environments demonstrate a gradient in the level of influence an individual has over the given environment. In the case of voting, an imposed environment may include the number of available polling stations, level of accessibility to the station, or elections which are already considered foregone conclusions prior to the individual's vote. Constructed environments may include political discussions and elections in which the individual perceives they may cast a deciding vote.

**Environmental factors and voting.** In addition to the environmental factors associated with access as described above, there are other broad environmental factors impacting likelihood to vote. Experiences of disenfranchisement within a community, poor weather, and distance to polling places can all have significant effects upon an individual's likelihood to vote.

***Disenfranchisement.*** As Anderson (2018) points out, there are a variety of structures in place in western democracy (including the US) to empower majority groups and disenfranchise minorities, consolidating power. Policies and practices including strict voter identification, legal removal of felon voting rights, and voter registration purges are all examples of environmental factors groups of voters encounter that not only make the act of voting more difficult, but also make them feel less welcome in the democratic electoral process (Alexander, 2010; C. E. Anderson, 2018). Strict voter identification

laws have been found to disproportionately decrease the voting rates of Black, Hispanic, Asian, and poor citizens (Hajnal et al., 2017). Friedman (2005) found that voter disenfranchisement practices were more likely in populations with high Black voter populations. Further, felon voting disenfranchisement disproportionately affects African American communities (King & Erickson, 2016). In sum, policies limiting voting access and rights decrease voter turnout and disproportionately affect minority communities.

***Weather.*** The physical environment can have a significant impact upon voter turnout when voting is done in person. In a historic overview of Korean national elections, elections held with inclement weather showed significantly lower turnout than other elections (Lee & Hwang, 2017). Amount of rainfall is negatively correlated with voter turnout in Kentucky elections, though the correlation is stronger in non-national elections (Gatrell & Bierly, 2002). Examining weather conditions and voter turnout in 14 national elections in the U.S., Gomez, Hansford, and Krause (2007) found that rainfall and snowfall both had significant effects on voter turnout and may have been decisive in two elections. These effects may be culturally or situationally dependent, as rainfall is not associated with voter turnout in Swedish elections (Persson et al., 2014).

***Distance.*** Being physically further from the nearest available polling place than other voters can put an undue cost on a voter and decrease their ability to vote. Distance to polling place is negatively correlated with voter turnout in the US, and distances tend to be higher when a voter is from the opposite party from local government (Joslyn et al., 2018). High distance to polling stations is more likely to prevent voters who vote on election day than those who tend to use early voting, and the relationship between

distance and voter turnout is nonlinear, such that distance only impacts turnout to 24 miles, after which there is no additional impact (Dyck & Gimpel, 2005).

In summary, a growing body of research supports the potential utility of SCT in examining voting behavior (Caprara et al., 2009; Darmofal, 2010; Torney-Purta et al., 2010). Political self-efficacy and its variations (internal/external political efficacy) are associated with higher levels of voting likelihood (Michelson, 2000; Moeller et al., 2014; Niemi et al., 1991; Strohmeier et al., 2017). Previous experience voting predicts higher likelihood of voting (Denny & Doyle, 2009; Hassell & Settle, 2017). Higher environmental costs of voting are associated with lower voter turnout (Hajnal et al., 2017; Li et al., 2018). Experiencing depression is associated with lower rates of voting (Ojeda & Pacheco, 2017; Ojeda & Slaughter, 2019). However, SCT has not been used as an overall framework to account for voting behavior.

### **SCT and Latinx Voting**

Though I did not find any research testing structural models of Latinx voting using SCT as a theoretical framework, there is some literature that employs SCT constructs in research on Latinx voting. Among Chicago residents, IPE was associated with likelihood to vote after controlling for socioeconomic factors for White respondents, but not for Latinos (Michelson, 2000). In a sample of 610 US citizens, there were no differences between the IPE of Latinos and the rest of the participants (Williamson & Scicchitano, 2015). A sample of Chicago residents showed that Latino participants reported lower IPE than White participants (Michelson, 2000). Latinos in California also reported lower IPE than did White participants (Michelson, 2003b). Parental voting behavior was a significant predictor of later-life child voting for both White and Hispanic

participants (Pacheco & Plutzer, 2007). In an all-Latino sample from California, naturalized citizens reported higher EPE than US-born citizens (Michelson, 2003b). Regarding environmental factors, Hispanics are more likely to be subject to voter identification practices than non-Hispanics (Atkeson et al., 2010). Although there are relatively few instances of SCT used in research to examine Latinx voting in the US, the findings from these few studies that use individual SCT constructs indicate that testing an SCT-based model of Latinx voting may be valuable.

### **Present Study and Proposed Models**

As supported by theory and evidence, voting behavior is predicted by a variety of environmental, internal, and past behavioral predictors, but has not been examined using SCT as a theoretical lens. In the present study, I develop and evaluate a model utilizing indicators representing each of Bandura's three domains to predict voting behaviors in young adults US citizens. The model includes contributions of personal, environmental, and behavioral factors on voting. The majority of research on voting influences in the US has focused on White citizens (Jackson, 2011; Leighley, 2014). The present study intentionally samples a diverse group of young adult and first-time voters to build upon and extend prior research on voting.

Because this study is cross-sectional and was conducted before the 2020 national election, I utilized likelihood to vote as my outcome variable. Effective prediction of an individual voting in an election remains difficult in the United States (Keeter et al., 2016). During the 1990's the discrepancy between the percentage of people who reported voting and the number of people who had voted through census data was as high as 20%, which is largely attributed to social desirability bias (Karp & Brockington, 2005). Smets

and van Ham (2013) report that intent to vote measures likely struggle with similar bias, though they have been less thoroughly examined. One of the solutions researchers have used to address this issue is using official voting records, though they can be difficult to obtain outside of governmental research (Smets & van Ham, 2013). Bolstein (1991) points out that while asking about an individual's likelihood to vote is not an exact measure of actual voting, it remains a stronger predictor than the combined explanatory power of identity markers, past voting behavior, party affiliation, political ideologies, and interaction with get-out-the-vote campaigns. Political scientists and pollsters typically measure likelihood to vote through reported intention to vote, past voting behavior, knowledge about the voting process, and campaign interest (Keeter et al., 2016).

Because my review of the literature did not result in finding a measure of self-efficacy relating to voting, I developed a measure of voting self-efficacy for the current study. Political self-efficacy serves as a covariate so that the developed VSE measure can be compared against an established measure of a similar construct. Measures of previous voting behavior and parent voting behavior represent Bandura's (1986) concepts of enactive attainment and vicarious experience, respectively. Cost Of Voting Index score, derived from 33 institutional arrangements either facilitating or obstructing ease of voting (Li et al., 2018) serves as the measure of environmental factors and is utilized as a covariate in the full model. In addition, two identity variables have been added to account for variance in likelihood of voting. First, because naturalized Hispanic citizens are significantly more likely to vote than their US-born counterparts (Leighley, 2014; Stempel & Hargrove, 2016), citizenship type served as a covariate. Further, because Hispanic women are more likely to vote than Hispanic men (United States Census

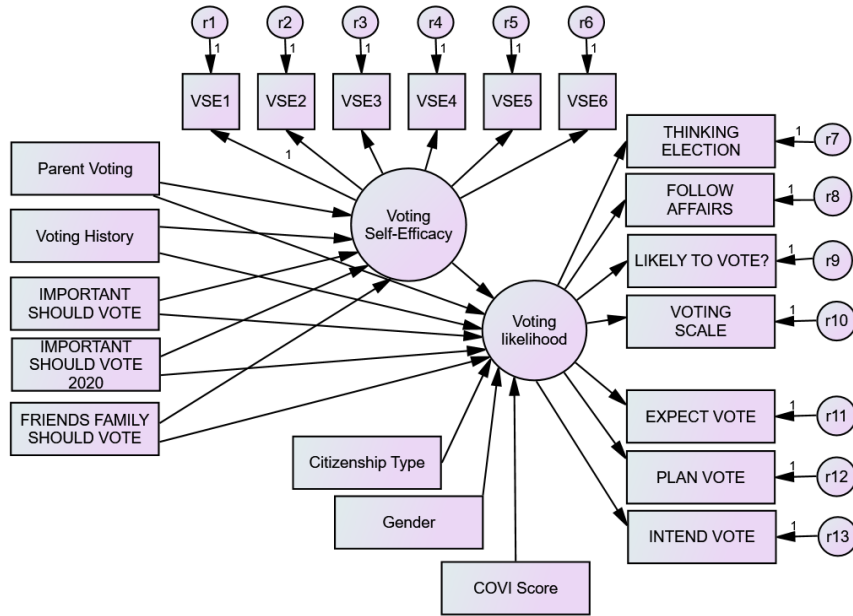


Bureau, 2017), self-reported gender also served as a covariate with our outcome. The model is depicted in Figure 2.

In addition to the full SCT structural model, I developed a second model to explore the relationship between depression, self-efficacy, and voting behavior. Previous research indicates that symptoms of depression have a negative bidirectional association with voting behavior (Ojeda, 2015; Ojeda & Pacheco, 2017; Pacheco & Fletcher, 2015). Further, Bandura (1982, 1986), posited that physiological health factors, such as depression, have a direct impact upon both an individual's self-efficacy and outcome expectations. As such, I developed a tripartite model to explore the association between depression, voting self-efficacy, and likelihood to vote. In the model, there are regression paths from depression to voting self-efficacy and likelihood to vote, as well as a regression path from voting self-efficacy to likelihood to vote. This second model provides an opportunity to explore the direct associations between these three constructs, as well as the potential mediating role of self-efficacy in the relationship between depression and likelihood to vote. The model is depicted in Figure 3.

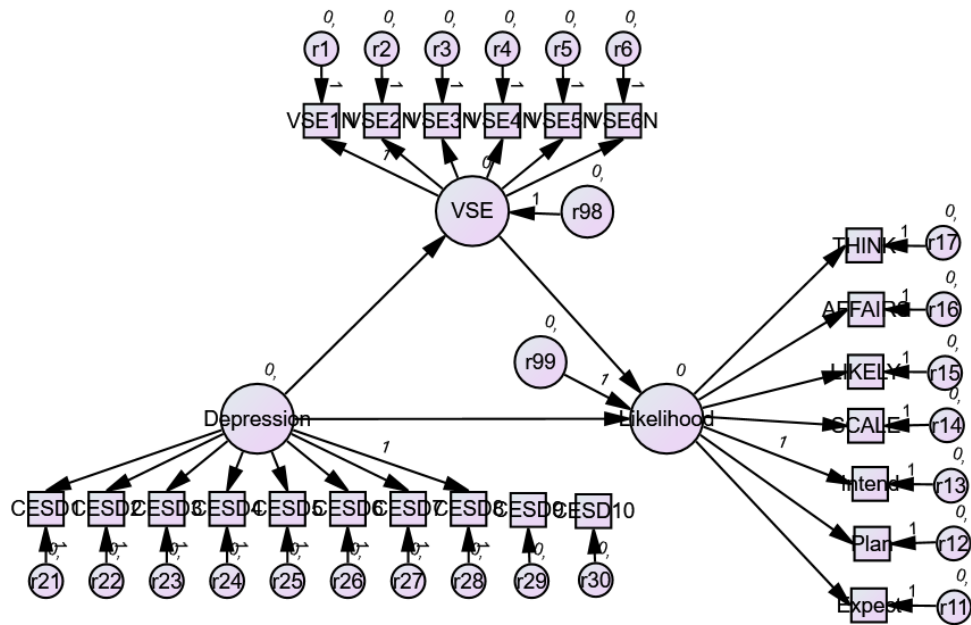
**Figure 2**

Proposed Social Cognitive Model of Likelihood to Vote



**Figure 3**

Proposed Model of Depression, Voting Self-Efficacy, and Likelihood to Vote



**Hypotheses:**

The overall hypothesis of the study is that the proposed model provides a good fit to the data with a diverse sample of young adults in higher education. Specific hypotheses are listed below:

Female participants will be more likely to intend to vote (United States Census Bureau, 2017).

Male participants will show higher levels of political self-efficacy (Centellas & Rosenblatt, 2018).

Male participants will show higher levels of voting self-efficacy.

White participants will be more likely to intend to vote than Latinxs (United States Census Bureau, 2017).

White participants will show higher levels of political self-efficacy than Latinxs (Michelson, 2000).

White participants will show higher levels of voting self-efficacy than Latinxs.

Political self-efficacy will be positively associated with likelihood of voting (Leath & Chavous, 2017; Vecchione et al., 2014).

Voting self-efficacy will be positively associated with likelihood to vote.

Previous voting behavior will be positively associated with likelihood to vote (Gerber et al., 2003; Green & Shachar, 2000).

Lower cost of voting (COVI) will be positively associated with likelihood of voting (Li et al., 2018).

The depression model of likelihood to vote will fit well.

Naturalized citizens will be more likely to vote (United States Census Bureau, 2017).

Naturalized citizens will show higher levels of political self-efficacy (Michelson, 2003a).

## CHAPTER II

### METHODOLOGY

#### **Procedure**

Prior to data collection, this study was reviewed and approved by the University of Oregon Institutional Review Board and Research Compliance Services (Protocol #05012020.002). I sent emails to department heads of programs in Latinx studies and psychology throughout the country. Surveys were sent out via an email link to the Qualtrics platform through the University of Oregon, creating unique, unidentifiable identification numbers associated with engaging in the survey. All measures were produced in both English and Spanish, as is recommended when working with Latinx populations (Adames & Chavez-Dueñas, 2017; Guillermo Bernal et al., 2003; Sue, 2008). The language that a participant chooses was recorded. A short demographic measure was used to obtain the participants' age, gender, country of birth, and familial country of origin, if known. This information was elicited due to intra-group differences in the Latinx community, such as that certain Latinx ethnic subgroups (especially Cuban Americans) are more likely to vote than others (Adames & Chavez-Dueñas, 2017; Bishin & Klofstad, 2012; Kreider & Baldino, 2016). Bernal and colleagues (2003) point out that many ethnic minority groups, including African American and Latino populations, have healthy skepticism around participating in psychological research. In order to address difficulty in recruitment, Bernal and colleagues (2003) recommend utilizing a combination of monetary incentives, securing connections with local community leaders, avoiding stigmatizing study names, and building persistence into study designs through multiple follow-up attempts. Requests to complete surveys were sent via email to

listservs and professors around the country, including Latinx cultural centers and organizations housed in colleges and universities in pursuit of more recruitment opportunities and more opportunities to measure sub-population cultural variance that can exist within Latinx groups which are often situated in different regions of the country (Adames & Chavez-Dueñas, 2017; Sue, 2008). Participation was incentivized through opportunities to win gift cards at random. A link was included in the final panel of the survey if respondent confirmed they are interested in being entered for the card. This link then asked for the respondent's email address, but the email was not linked to the responses from the survey.

## **Participants**

Participants from 29 states responded to the survey. A total of 709 participants consented to participate in the study. Sixty-nine participants were excluded from submitting data for not meeting criteria (i.e. age, attending college). Of the remaining 640 participants, 49 were excluded from analyses due to being ineligible to vote (i.e. non-citizens). Thirty-nine were excluded from analyses due to failing to complete the survey (i.e. not completing any items on the final page of the survey). Another 42 were excluded for not providing information on whether they were registered to vote or their zip code for developing a COVI score. Due to a lack of responses and concerns regarding univariate normality, the 10 transgender/third gender responses were removed from the data set. Data from the remaining 500 responses were retained for analyses. Of the 500 final responses, 201 identified as Latinx or Hispanic. The majority of participants identified as U.S.-born citizens ( $n = 479$ ), while 21 identified as naturalized citizens. The majority identified as female ( $n = 396$ ), and the average age of respondents was 20.34

years old ( $SD = 1.24$ ). See Table 1 for additional sample demographics. Familial country of origin statistics are available in Table 2.

**Table 1**

***Sample Demographics (N = 500)***

Demographic Variable	N
Race	
Asian	45
Black/African American	43
Indigenous	87
Pacific Islander	6
White	320
Other	17
Rather not say	12
Multiracial	33
Ethnicity	
Latinx/Hispanic	201
Non-Latinx/Hispanic	298
Gender	
Female	396
Male	104
Voting History	
Have voted before	342
Have never voted before	158
Total	500

**Table 2*****Participant Family Country of Origin (N = 500)***

Family Country of Origin	<i>N</i>
Argentina	5
Colombia	6
Cuba	4
Ecuador	4
El Salvador	10
England	4
Guatemala	6
Honduras	7
India	9
Mexico	123
Peru	7
Philippines	4
Puerto Rico	22
South Korea	7
Spain	13
United States	287
Venezuela	6
Vietnam	7
Prefer not to say	6
Total	500

*Note.* Participants were permitted to choose multiple countries of familial origin. Countries with fewer than four endorsements were excluded from the table for succinctness. Excluded countries were: Bangladesh, Bolivia, Brazil, Canada, China, Costa Rica, Denmark, Dominican Republic, Egypt, Ethiopia, France, Germany, Ghana, Greece, Guyana, Haiti, Iran, Ireland, Italy, Laos, Lebanon, Liberia, Netherlands, New Zealand, Nicaragua, Nigeria, Pakistan, Panama, Poland, Sicily, Syria, Turkey, Uruguay.



## Measures

The current section describes the measures used in the current study. All internal consistency reliabilities for present study are reported in the preliminary analyses section of the results chapter.

**Likelihood to vote.** The most commonly used measure of likelihood of voting in polling was developed by Perry (1960; Keeter et al., 2016). The measure includes questions regarding the amount of time spent thinking about the election, history of voting, perceived likelihood to vote, and if obstacles prevented voting (Perry, 1960). Keeter and colleagues (2016) compared the Perry (1960) measure to three other measures of likelihood to vote and found that the Perry scale was the most consistently accurate measure of likelihood to vote in US elections over several decades, providing some evidence of validity. Keeter et al. (2016) adjusted this measure to account for young voters, removing the questions regarding previous voting (Keeter et al., 2016). The items from Keeter's adaptation of the Perry measure can be found in Appendix B.

Due to relatively low prior usage of Perry's (1960) measure with first-time voters, and ongoing challenges in the measurement of likelihood to vote. I included a second set of items to assess likelihood of participants' voting, specifically focusing on young adult and first-time voters. Glasford (2008) developed a three-item measure assessing participants' intent, expectations, and plans to vote in an upcoming election. Each item allows for responses from 1 (strongly disagree) to 4 (strongly agree). Glasford's (2008) items showed strong internal consistency ( $\alpha = .95$ ). These items have been associated with known information about voting and social motivation to vote (Glasford, 2008) but

no additional reliability or validity information is available. These items can be found in Appendix B.

**Political self-efficacy.** The Perceived Political Self-Efficacy Scale (PPSE; Caprara et al., 2009) is a 10-item survey examining political self-efficacy, developed through Bandura's (2006) recommendation on developing self-efficacy scales. Participants are asked "For each of the following items, please rate how confident you are in your ability to execute the specific action or behavior described:" with options ranging from 1 (not at all) to 5 (completely; Caprara et al., 2009, pp. 1006–1007). The scale shows a one-factor solution that fits well (SRMR = 0.04-0.08) with good internal consistency ( $\alpha = .91$ ). PPSE scores were not correlated with income, demonstrating discriminant validity. Compared to available measures of political efficacy, PPSE explains a greater amount of variance in political behaviors, including voting, discussing politics, and boycotting products (Caprara et al., 2009). Politicians showed higher PPSE scores than politically active citizens, who had higher PSE scores than other voters (Caprara et al., 2009). A shorter version of the PPSE is available, though it does not demonstrate the same psychometric strength (Vecchione et al., 2014).

**Voting self-efficacy.** Although the PPSE is associated with a variety of political activities and shows psychometric validity regarding its main construct, it is not domain specific to voting. As Bandura (2006) points out, "scales of perceived self-efficacy must be tailored to the particular domain of functioning" (p. 288). As such, the development of a new scale was warranted for the present study. I developed six items using Bandura's (2006) recommendations for developing self-efficacy scales. (see Appendix B) focused on participants' perceived self-efficacy regarding voting and registering to vote. All items

were prefaced with “For each of the following, please rate how confident you are in your ability to execute the action or behavior described” with options ranging from 1 (not at all) to 5 (completely). Because this was a newly developed scale, I conducted an exploratory factor analysis to assess the structure of the scale; findings are reported in the results chapter.

**Depression.** The Center for Epidemiologic Studies Depression-10 (CES-D) is a 10-item self-report measure of depression. It has been administered to a variety of populations, including White and Latinx samples (P. González et al., 2017; Grzywacz et al., 2010; Miller et al., 2008; Rivera-Medina et al., 2010). In both populations, it has consistently shown a one-factor model, with convergent validity with anxiety and other depression measures (.91). It has fair to good internal consistency ( $\alpha = .73 - 0.86$ ), and a tested 9-month retest reliability ( $r = .53 - .71$ ). The measure provides a prompt “Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week” and with four options for each query, ranging from “Rarely or none of the time (less than 1 day)” to “Most or all of the time (5-7 days).”

**Parental voting.** There are no measures consistently used to measure a person’s knowledge of their parents voting behaviors at any age. Most studies have utilized parental self-report of voting behavior (Bhatti & Hansen, 2012; Pacheco & Plutzer, 2007; Plutzer, 2002; Sandell & Plutzer, 2005). Importantly, however, a parental self-report of voting behavior is not theoretically supported, as parental voting is being utilized as a measure of vicarious experience. Instead, what is needed is a measure of how often a child saw or understood that their parents engaged in the behavior (Bandura, 1986). To accommodate this, I asked, “How often did your parents or caretakers vote when you

were a child?” with options including 1 “Never,” 2 “Sometimes,” 3 “Often,” and 4 “Always.” There is also an “I don’t know/don’t remember” answer option.

**Social persuasion.** Glasford (2008) developed a three-item measure to examine social pressures influencing young voters’ likelihood to vote. These items query whether the participant believes that their social influences (e.g. friends and family) think they should engage in voting behavior, such as “My friends and family think I should vote in the 2004 presidential election.” Each item allows for responses from 1 (strongly disagree) to 4 (strongly agree). The items showed high internal consistency ( $\alpha = .96$ ; Glasford, 2008). These items closely align with the SCT concept of social persuasion and were used as predictors of self-efficacy.

**Voting access.** Based on their reported zip code of voter registration or zip code of residence if not registered to vote, participants were associated with a cost of voting index score, based on relative cost of voting in the participant’s state (Li et al., 2018).

**Previous voting behavior.** Regarding previous voting behaviors, there were two questions. The first question asks, “Are you registered to vote in the US?” with answer choices limited to “Yes,” “No,” and “I do not know.” The second question was “Have you voted in a US election before?” with the same choices.

## CHAPTER III

### RESULTS

In this section, I describe the results of preliminary and descriptive analyses, factor analyses, univariate tests, testing and measurement of the structural model, and direct effects. Missing data were assessed using RStudio Version 1.3.1093. Structural testing and direct effects were carried out through IBM SPSS Amos 27 for Windows. All other statistical analyses were performed using IBM SPSS 26.0 for Windows.

#### **Preliminary Analyses**

Preliminary analyses were conducted and are presented in five steps. First, data were screened for missing data and outliers. Next, data were evaluated to assess for assumptions of linearity, normality, and homoscedasticity. Then, descriptive statistics, including means and standard deviations, were examined. Next, exploratory factor analyses were carried out to (a) assess the structure of the measure of voting self-efficacy developed for the purpose of this study and (b) evaluate the appropriateness of study variables for structural equation modeling analyses. Finally, group differences were carried out prior to structural model testing.

Overall missingness was low; missing responses for items ranged from 0.00% to 1.00%. No influential outliers were detected. Examination of histograms, skew, and kurtosis revealed that data met assumptions of normality. Variables did not exceed cutoffs for skewness ( $> 3$ ) or kurtosis ( $> 10$ ), indicating that the assumption of normality was tenable (Weston & Gore, 2016). One exception to this was citizenship type, which was highly skewed (4.64) and kurtotic (19.58), as relatively few naturalized citizens ( $n = 21$ ) responded to the survey, compared to U.S.-born citizens ( $n = 490$ ). Citizenship status

was intended to be a covariate in the proposed study, but due to the low participation of naturalized citizens, citizenship status was removed from the model. Means, standard deviations, and possible ranges of study variables can be found in Table 3.

**Table 3**

*Means, Standard Deviations, and Ranges of Study Variables (N = 500)*

Variable	<i>M</i>	<i>SD</i>	Minimum	Maximum
Depression	1.12	0.65	0.00	3.00
Voting self-efficacy	4.99	0.75	1.00	6.00
Political self-efficacy	2.53	0.82	1.00	5.00
Likelihood to vote	3.79	0.49	1.00	4.00
Parental vote history	2.76	1.18	1.00	4.00
People important to me think I should vote	3.56	0.59	1.00	4.00
People think I should vote in 2020	3.60	0.61	1.00	4.00
Friends and family think I should vote	3.57	0.59	1.00	4.00
Cost of voting index score	0.31	0.77	-2.06	1.30
Vote history	0.68	0.47	0.00	1.00

*Note:* means and standard deviations for depression, voting self-efficacy, political self-efficacy, and likelihood were calculated using mean scores of the final set of items as determined by Exploratory Factor Analyses below. True maximum and minimum scores for cost of voting were not available.

### ***Exploratory Factor Analyses***

The current section describes factor analyses conducted to evaluate the structure of the items in this sample. Findings were used to create the observed and latent variables utilized in the proposed model (J. C. Anderson & Gerbing, 1988).

**Depression.** An initial reliability analysis of CES-D 10 items demonstrated “middling” to good reliability ( $\alpha = .79$ ; Howard, 2016), though item-total statistics indicated that the reliability would be improved by the deletion of the two reverse-scored items: “I felt hopeful about the future” and “I was happy.” The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (.877) and Barlett’s test of sphericity ( $\chi^2 = 1242.26, p < .001$ ) indicated that the sample was suitable for factor analysis (Bryant & Yarnold, 1995). An EFA of the items was carried out using principal axis factoring with varimax rotation, with missing data deleted pairwise. Initial communalities ranged from .12 to .49. Using the criteria of eigenvalues  $> 1.0$  and observing for the “break” in the scree plot (Costello & Osborne, 2005, p. 3), a two-factor solution was supported, explaining 38.34% of the variance after 25 iterations. Factor loadings of items ranged from .20 to .76. The first factor was comprised of the eight positively scored items, while the two reverse-scored items, “I felt hopeful about the future” and “I was happy” comprised the second factor. The item loading for Item 8 “I was happy” on the second factor was relatively low (.36) (Howard, 2016). Considering the lack of support for a two-factor model in previous literature, the lack of stability of 2-item factors, the low factor loading of item 8, and indications that reliability could be improved by the item’s removal, another EFA was conducted without item 8.

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (.888) and Barlett’s test of sphericity ( $\chi^2 = 1180.78, p < .001$ ) indicated that the sample was suitable for factor analysis (Bryant & Yarnold, 1995). The same specifications (rotation, extraction) were utilized. Initial communalities ranged from .04 to .49. A one-factor solution was indicated by this analysis explaining 35.13% of the variance, with factor

loadings ranging from .15 to .76. The lowest factor loading was the remaining reverse-coded item, item 5, “I felt hopeful about the future.” Considering this factor loading was significantly below cutoff criteria for acceptable fit (Costello & Osborne, 2005; Howard, 2016), a third EFA was carried out excluding item 5.

I conducted a third factor analysis excluding the “I felt hopeful about the future” item. Item-total statistics demonstrated no further improvement by removal of any remaining items. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (.890) and Barlett’s test of sphericity ( $\chi^2 = 1161.29, p < .001$ ) indicated that the sample was suitable for factor analysis (Bryant & Yarnold, 1995). Initial communalities ranged from .23 to .47. A one-factor solution was indicated explaining 39.23% of the variance, with factor loadings ranging from .51 to .75. Due to the substantial improvement in factor loadings and its achievement of a one-factor solution similar to that found in previous research (P. González et al., 2017), the scale was used with the eight items from the final factor analysis (Costello & Osborne, 2005; Howard, 2016). Internal consistency for the 8 items was  $\alpha = .83$ . Final factor loadings by item can be found in Table 4. A depression score was calculated by creating a mean score of the eight retained CES-D 10 items from this final EFA.



**Table 4*****Final Factor Loadings for Exploratory Factor Analysis of 8 CES-D 10 Items (N = 500)***

Item	Factor loading
3. Felt depressed	.75
8. Could not get going	.69
2. Trouble keeping mind	.66
4. Everything an effort	.60
7. Felt lonely	.60
5. Felt tearful	.58
1. Bothered by things	.53
6. Restless sleep	.51

**Voting Self-Efficacy.** The KMO measure of sampling adequacy (.821) and Barlett's test of sphericity ( $\chi^2 = 1225.34$ ,  $p < .001$ ) indicated that the sample was suitable for factor analysis (Bryant & Yarnold, 1995). An EFA of the 6 items was carried out using principal axis factoring with varimax rotation, with missing data deleted pairwise. Initial communalities ranged from .33 to .59. Using the criteria of eigenvalues  $> 1.0$  and observing for the "break" in the scree plot (Costello & Osborne, 2005, p. 3), a one factor solution was supported, explaining 48.09% of the variance after 5 iterations. Factor loadings of items ranged from .59 to .79 ( $\alpha = .84$ ). Factor loadings for each item can be found in Table 5. A mean score was calculated using the VSE items.

**Table 5*****Final Factor Loadings for Exploratory Factor Analysis of 6 Voting Self-Efficacy Items******(N = 500)***

Item	Factor loading
5. Learn about election	.79
1. Information to register	.74
3. Overcome obstacles	.69
2. Successfully register	.69
6. Make informed decision	.64
4. Find time and transportation	.58

**Perceived Political Self-Efficacy.** KMO measure of sampling adequacy (.925) and Barlett's test of sphericity ( $\chi^2 = 2512.82, p < .001$ ) indicated that the sample was suitable for factor analysis (Bryant & Yarnold, 1995). An EFA of the items was carried out using principal axis factoring with varimax rotation. Initial communalities ranged from .31 to .65. Using the criteria of eigenvalues  $> 1.0$  and observing for the "break" in the scree plot (Costello & Osborne, 2005, p. 3), a one factor solution was supported, explaining 49.27% of the variance ( $\alpha = .90$ ). Factor loadings of items ranged from .53 to .82 (See Table 6). A one factor solution is consistent with prior findings on the measure (Caprara et al., 2009). A mean score was calculated using the 10 PPSE items.

**Table 6*****Final Factor Loadings for Exploratory Factor Analysis of 10 Political Self-Efficacy******Items (N = 500)***

Item	Factor loading
8. Mobilize community	.82
6. Information campaign	.80
7. Promote candidates	.79
10. Monitor representatives	.74
5. Play decisive role	.71
3. Promote initiatives	.70
4. Maintain relationships	.68
2. Honor commitments	.63
9. Collect money	.58
1. State opinion clearly	.53

**Likelihood to Vote.** I included two different measures of likelihood to vote. I conducted an EFA to explore whether a one-factor structure or a two-factor structure provided a better representation of the combined items from both measures (Glasford, 2008; Keeter et al., 2016; Perry, 1960). The KMO measure of sampling adequacy (.857) and Barlett's test of sphericity ( $\chi^2 = 2487.24, p < .001$ ) indicated that the sample was suitable for factor analysis (Bryant & Yarnold, 1995). A reliability analysis yielded good reliability among likelihood to vote items (Howard, 2016;  $\alpha = .84$ ). An EFA of the 7 items was carried out using principal axis factoring with varimax rotation, with missing data deleted pairwise. Initial communalities ranged from .43 to .92. Using the criteria of

eigenvalues  $> 1.0$  and observing for the “break” in the scree plot (Costello & Osborne, 2005, p. 3), a two-factor solution was supported, explaining 77.50% of the variance after 14 iterations. Factor loadings of items ranged from .20 to .76. The first factor was comprised of the three Glasford (2008) items and the items “How likely are you to vote in the general election this November?” (Likelihood) and “Please rate your chance of voting in November on a scale of 1 (definitely not going to vote) to 10 (definitely will vote)” (Scale) from the Keeter (2016) measure. The remaining two items “Would you say you follow what’s going on in government and public affairs most of the time, some of the time, only now and then, hardly at all?” (Affairs) and “How much thought have you given to the coming November election?” (Thought) comprised the second factor. Both of the latter items showed problematically high cross loadings (Howard, 2016); Thought demonstrated a factor loading of .63 on the second factor and .54 on the first factor and Affairs showed a factor loading of .63 on the second factor and .45 on the first. Because of this high multiple factor loadings, the Thought item was removed and another EFA was conducted with the remaining items.

A reliability analysis yielded good reliability among likelihood to vote items (Howard, 2016;  $\alpha = .83$ ). An EFA of the items was carried out using principal axis factoring with varimax rotation, with missing data deleted pairwise. Initial communalities ranged from .15 to .92. Using the criteria of eigenvalues  $> 1.0$  and observing for the “break” in the scree plot (Costello & Osborne, 2005, p. 3), a one-factor solution was supported, explaining 70.38% of the variance after five iterations. Factor loadings of items ranged from .35 to .96. The Affairs item showed the lowest factor loading of .35, below the recommended cutoff of .40 (Howard, 2016). Due to the lack of a clear

unifactorial or two factor structure with the Keeter (2016) items included, an EFA was conducted with only the Glasford (2008) items.

A reliability analysis of these three items yielded great reliability (Howard 2016;  $\alpha = .96$ ). An EFA of these three items was carried out using principal axis factoring with varimax rotation. Initial communalities ranged from .80 to .91. Using the criteria of eigenvalues  $> 1.0$  and observing for the “break” in the scree plot (Costello & Osborne, 2005, p. 3), a one factor solution was supported, explaining 90.20% of the variance. Factor loadings of items ranged from .90 to .98, as shown in Table 7. A mean score was calculated utilizing the remaining three items.

**Table 7**

***Factor Loadings for Exploratory Factor Analysis of 3 Likelihood to Vote Items (N = 500)***

Item	Factor loading
2. Plan to vote	.98
3. Intend to vote	.96
1. Expect to vote	.90

### ***Group Differences***

In this section I examine group differences among study variables by gender and ethnicity using *t*-tests. Because I carried out two sets of 10 univariate tests, I utilized the Bonferonni family-wise correction to interpret significance to reduce the chance of a type I error (Keppel & Wickens, 2004). Instead of using the traditional cutoff of .05 for *p* value significance, I used .005 (.05/10).

**Gender.** Because gender is one of the covariates in our proposed model, differences among study variables were examined by gender via independent-samples  $t$  tests. Means and standard deviations of study variables by gender can be found in Table 8. The assumption of homogeneity of variance was met through Levene's  $F$  test for analyses of gender differences, with the exception of voting history and likelihood to vote.

In testing gender differences among likelihood to vote scores, the assumption of homogeneity of variances was not met via Levene's  $F$  test,  $F(498) = 31.65, p < .001$ . Utilizing the Welch-Satterthwaite adjustment to degrees of freedom, female participants' likelihood to vote scores were significantly higher than those of their male counterparts ( $t(128.47) = 2.82, p = 0.006$ ). In testing gender differences on voting history, the assumption of homogeneity of variances was not satisfied via Levene's  $F$  test,  $F(498) = 6.49, p = .011$ . I therefore utilized the Welch-Satterthwaite adjustment to degrees of freedom. There was no statistical significance difference between the responses of male and female participants on voting history  $t(498) = 1.41, p = .162$ .

Regarding depression differences by gender, female participants endorsed significantly higher rates of depression than their male counterparts  $t(498) = 3.56, p < .001$ . There were no significant gender differences among VSE scores ( $t(498) = -0.11, p = .91$ ), PPSE scores ( $t(498) = -0.47, p = .638$ ), parental voting histories ( $t(498) = 0.77, p = .443$ ), the item "most people who are important to me think I should vote" ( $t(498) = 1.67, p = .095$ ), the item "most people who are important to me think I should vote in the 2020 presidential election" ( $t(498) = 1.89, p = .059$ ), the item "my friends and family

think I should vote in the 2020 presidential election” ( $t(498) = 2.07, p = .039$ ), or COVI score ( $t(498) = 1.30, p = .193$ ).

**Table 8**

*Means, Standard Deviations, and Ranges of Study Variables by Gender (N = 500)*

Variable	Female (N = 396)		Male (N = 104)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Depression*	1.17	0.66	0.92	0.59
Voting self-efficacy	4.99	0.65	5.00	0.70
Political self-efficacy	2.52	0.81	2.56	0.89
Likelihood to vote	3.83*	0.43	3.64*	0.64
Parental vote history	2.78	1.19	2.68	1.14
People important to me think I should vote	3.59	0.59	3.48	0.57
People think I should vote in 2020	3.63	0.61	3.50	0.59
Friends and family think I should vote	3.60	0.58	3.46	0.62
Cost of voting index score	0.34	0.78	0.23	0.75
Vote history	0.70	0.46	0.63	0.49

*Note:* \* indicates significant difference by gender  $p < .005$

**Ethnicity.** Differences among study variables were examined by ethnicity via independent-samples  $t$  tests. Means and standard deviations of study variables by ethnicity can be found in Table 9. The assumption of homogeneity of variance was met through Levene’s  $F$  test for analyses of ethnic differences, with the exceptions of parental voting history and COVI score.

Regarding parental voting history differences by ethnicity, the assumption of homogeneity of variances was not satisfied via Levene's  $F$  test,  $F(423) = 44.62, p < .001$ . Utilizing the Welch-Satterthwaite adjustment to degrees of freedom, non-Latinx White participants' parental voting histories were significantly higher than those of their Latinx counterparts ( $t(370.59) = 9.50, p < .001$ ). Regarding ethnicity differences in COVI score, the assumption of homogeneity of variances was not satisfied via Levene's  $F$  test,  $F(423) = 13.28, p < .001$ . Utilizing the Welch-Satterthwaite adjustment to degrees of freedom, there was no statistical significance difference between the scores of Latinx and non-Latinx White participants  $t(420.57) = -1.50, p = .135$ .

There were no significant ethnic differences by depression scores ( $t(423) = -1.11, p = .266$ ), VSE scores ( $t(423) = 1.96, p = .051$ ), PPSE scores ( $t(423) = -2.58, p = .010$ ), likelihood to vote ( $t(423) = -0.03, p = .974$ ), the item "most people who are important to me think I should vote" ( $t(423) = 0.34, p = .733$ ), the item "most people who are important to me think I should vote in the 2020 presidential election" ( $t(423) = 0.90, p = .367$ ), the item "my friends and family think I should vote in the 2020 presidential election" ( $t(423) = -0.07, p = .943$ ), or voting history ( $t(423) = 0.02, p = .984$ ).

### **Structural Model**

Results of Little's Missing Completely at Random (MCAR) test,  $\chi^2(322) = 399.17, p = .002$  indicated that the MCAR assumption was not tenable. Data were determined



**Table 9*****Means, Standard Deviations, and Ranges of Study Variables by Ethnicity (N = 500)***

Variable	Non-Latinx White (N = 224)		Latinx (N = 201)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Depression	1.09	0.65	1.16	0.65
Voting self-efficacy	5.05	0.73	4.91	0.78
Political self-efficacy	2.45	0.78	2.66	0.85
Likelihood to vote	3.80	0.49	3.80	0.47
Parental vote history	3.23*	0.92	2.23*	1.21
People important to me think I should vote	3.57	0.57	3.55	0.62
People think I should vote in 2020	3.63	0.59	3.57	0.62
Friends and family think I should vote	3.56	0.60	3.56	0.60
Cost of voting index score	0.25	0.82	0.36	0.68
Vote history	0.69	0.46	0.69	0.47

*Note:* \* indicates significant difference by ethnicity,  $p < .005$

to be not missing at random. Item 6 from the CES-D 10 items “I felt fearful” was the only item with more than two missing responses ( $n = 5$ ). Missingness on this item was not significantly different by gender ( $\chi^2(1, N = 500) = .002, p = .965$ ) or ethnicity ( $\chi^2(1, N = 500) = .108, p = .742$ ). Missing data were imputed using the full information maximum likelihood (FIML) algorithm. Bivariate correlations indicated significant relationships between study variables (see Table 10). Once assumptions were met for model testing, analyses were carried out. Models were estimated using Maximum Likelihood estimation (ML). Specifically, a chi-square test, comparative fit index (CFI), standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA) were examined to test the fit of the structural model to the data. Recommended cutoff criteria (Hu & Bentler, 1999) were utilized as follows: (a) CFI is above .95, (b) SRMR below .08, and (c) RMSEA is below .06. In structural modeling, chi-square can be influenced by sample size, with large sample size often resulting in significant results; Hoelter’s  $N$  indicates the largest sample size in which a non-significant chi-square can be found in the available data (Hoelter, 1983). A result of 200 or higher indicates good fit. The structural model was tested using data from the full sample (Figure 4,  $N = 500$ ). The model was recursive and over-identified (377 sample moments, 113 estimated parameters) and convergence was achieved in 15 iterations. Results showed poor fit of the proposed model:  $\chi^2(264) = 866.653, p < .001$ ; CFI = .915, SRMR = .093, RMSEA = .068, Hoelter’s  $N = 175$ .

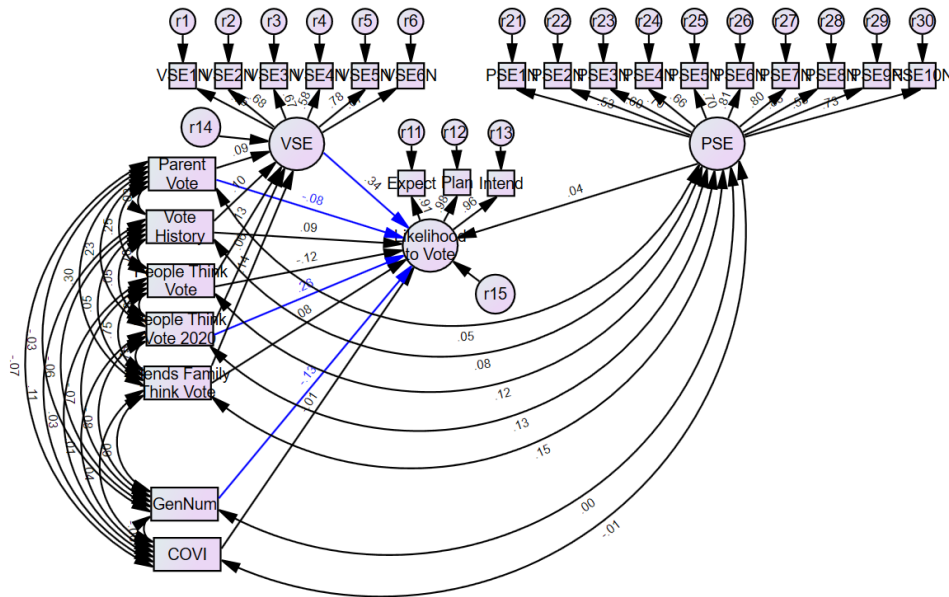
### ***Regressions***

Standardized regression weights were examined with a criteria of  $p < .05$ . voting self-efficacy had a significant ( ) positive direct effect on likelihood to vote ( $\beta = .34$ ),

consistent with hypothesis 2. The item “most people who are important to me think I should vote in the 2020 presidential election” also had a significant positive effect on likelihood to vote ( $\beta = .26$ ). Further, having previously voted also had a significant positive effect on likelihood to vote ( $\beta = .09$ ) in support of hypothesis 4. Parental voting history had a significant negative effect on likelihood to vote ( $\beta = -.08$ ). Gender also had a significant relationship with likelihood to vote ( $p < .05$ ). Regarding paths to the latent voter self-efficacy measure, having previously voted had a significant positive effect ( $\beta = .11$ ). Inconsistent with hypothesis 1, political self-efficacy did not have a significant effect on likelihood to vote ( $p = .394$ ). Similarly, COVI did not have a significant association with likelihood to vote ( $p = .879$ ; hypothesis 3). All standardized and unstandardized path coefficients can be found in Table 11.

**Figure 4**

Utilized Social Cognitive Model with Standardized Estimates ( $N = 500$ )



*Note.* Blue arrows indicate significant regressions.

**Table 10*****Bivariate Correlations and p-Values between Study Variables (N = 500)***

	Parent vote	Voting SE	Political SE	Likelihood vote	Cost of voting	Should vote	Should 2020	Friends family	Vote history
Parent vote	-	< .001	.495	.472	.138	< .001	< .001	< .001	.436
Voting SE	0.17*	-	< .001	< .001	.107	< .001	< .001	< .001	.013
Political SE	0.03	0.39*	-	< .001	.663	.010	.003	.001	.143
Likelihood vote	0.03	0.39*	0.19*	-	.534	< .001	< .001	< .001	.001
Cost of voting	-0.07	0.07	-0.02	0.03	-	.550	.768	.419	.013
Should vote	0.25*	0.30*	0.12*	0.26*	0.03	-	< .001	< .001	.121
Should 2020	0.24*	0.28*	0.13*	0.32*	-0.01	0.82*	-	< .001	.282
Friends family	0.30*	0.30*	0.15*	0.29*	0.04	0.75*	0.75*	-	.208
Vote history	-0.04	0.11*	0.07	0.15*	0.11*	0.07	0.05	0.06	-

*Note:* correlations are presented below the diagonal; *p*-values are presented above the diagonal; \* indicates significant correlation,  $p < .05$ .

Parent vote: Parent voting history; Voting SE: Voting Self-Efficacy; Political SE: Political Self-Efficacy; Likelihood vote: Likelihood to vote; Cost of Voting: Cost of Voting Index; Should vote: “Most people who are important to me think I should vote;” Vote 2020: Most people who are important to me think I should vote in the 2020 presidential election;” Friends family: “My friends and family think I should vote in the 2020 presidential election.”

**Table 11*****Regression Coefficients, Standard Errors, and Significance Levels for Proposed Model******Paths (N = 500)***

Parameter	<i>b</i> ( $\beta$ )	S.E.	<i>p</i>
Voting self-efficacy $\leftarrow$ Parental voting	.05 (.08)	.03	.079
Voting self-efficacy $\leftarrow$ Previously voted	.17 (.10)	.08	.025
Voting self-efficacy $\leftarrow$ Others think I should vote	.17 (.13)	.11	.127
Voting self-efficacy $\leftarrow$ Others think I should vote in 2020	.07 (.06)	.11	.483
Voting self-efficacy $\leftarrow$ Friends and family think I should vote in 2020	.19 (.14)	.10	.055
Likelihood to vote $\leftarrow$ Voting self-efficacy	.22 (.34)	.03	<.001
Likelihood to vote $\leftarrow$ Parental voting	-.03 (-.08)	.02	.068
Likelihood to vote $\leftarrow$ Previously voted	.09 (.09)	.04	.033
Likelihood to vote $\leftarrow$ Others think I should vote	-.10 (-.12)	.06	.104
Likelihood to vote $\leftarrow$ Others think I should vote in 2020	.21 (.26)	.06	<.001
Likelihood to vote $\leftarrow$ Friends and family think I should vote in 2020	.06 (.08)	.06	.247
Likelihood to vote $\leftarrow$ COVI	-.01 (-.01)	.03	.879
Likelihood to vote $\leftarrow$ Political self-efficacy	.02 (.04)	.02	.394

### ***Modification Indices***

Examination of modification indices showed a total of 69 potential correlations that could have been added to improve model fit. Corresponding changes in chi-square values ranged from 4.14 to 81.64. All potential modifications of allowing an additional correlation involved at least one residual term, which is not recommended in model testing (MacCallum et al., 1992). Further, six regression weights (see Table 12) were recommended as potential modifications. Potential changes in chi-square results ranged from 4.15 to 61.05. All regression modifications involved at least one manifest variable from a scale and a variable other than its corresponding latent variable. None of these modifications were supported by prior theory. Because none of the calculated modification indices were theory-driven (MacCallum et al., 1992), none were implemented into the current model.

**Table 12**

#### ***Regression Modification Indices (N = 500)***

Parameter	Chi-square change
VSE1 $\leftarrow$ PPSE1	61.05
VSE6 $\leftarrow$ PPSE1	27.79
VSE5 $\leftarrow$ PPSE1	21.31
VSE6 $\leftarrow$ COVI	6.64
PPSE9 $\leftarrow$ COVI	4.70
VSE6 $\leftarrow$ PPSE7	4.15

*Note:* Parameters above refer to items from VSE and PPSE scales, i.e. VSE(item number).

## **Depression and Likelihood to Vote**

The second model tested the proposed relationship between depression, voting self-efficacy, and likelihood to vote. Bivariate correlations between these variables can be found in Table 13. The structural model was tested following the same procedure as the full structural model and data from the full sample (Figure 5,  $N = 500$ ). The model was recursive and over-identified (170 sample moments, 54 estimated parameters) and convergence was achieved in 9 iterations. Results showed indications of good fit:  $\chi^2(116) = 353.936, p < .05$ ; SRMR = .04, RMSEA = .06 CFI = .95, Hoelter's  $N = 201$ . Results indicated the model provided good fit.

Standardized regression weights indicated that voting self-efficacy had a significant ( $p < .05$ ) positive direct effect on likelihood to vote ( $\beta = .42$ ), though depression had no significant effect on likelihood to vote. Depression showed a significant negative effect on voting self-efficacy ( $\beta = -.12; p < .05$ ). Regression coefficients, standard errors, and significance levels for model paths can be found in Table 14.

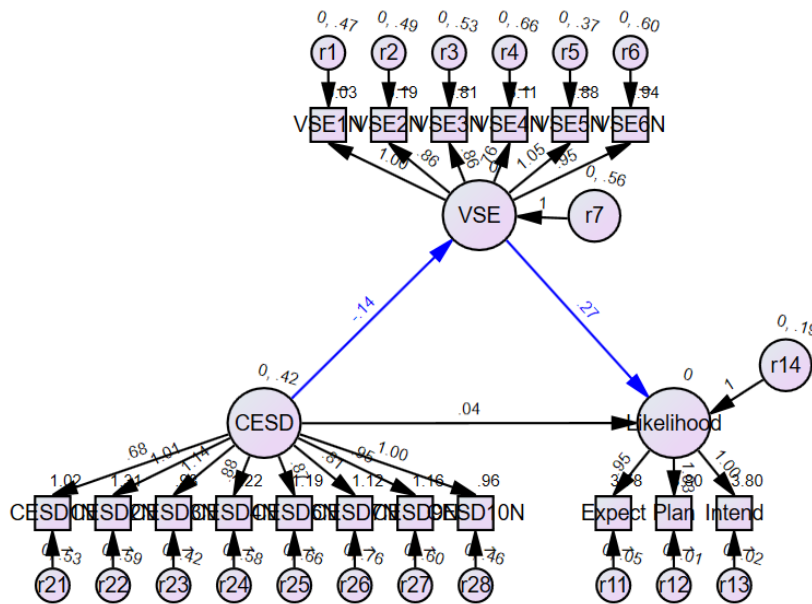
## **Indirect Effect**

The indirect effect in the depression model was evaluated to investigate the potential mediating role of voting self-efficacy on the relationship between depression and voting likelihood. In order to establish a basis for mediation analyses, I conducted an analysis of the direct effect of depression on likelihood to vote, without including VSE. Depression did not show a significant effect on likelihood to vote ( $\beta = .001; p = .969$ ), indicating no mediation effect could be analyzed. Parametric bootstrapping (Kline, 2016) was utilized to generate 5000 samples (Preacher & Hayes, 2008) to evaluate the statistical

significance of indirect by assessing a bias-corrected 95% confidence interval. Results indicated that the indirect effect of depression on likelihood to vote was significant ([unstandardized]  $p = .021$ , CI  $[-.075$  to  $-.006]$ ) through voting self-efficacy. This result indicates that higher levels of depression are associated with lower likelihood to vote through a negative impact of depression voting self-efficacy. In the current study, depression showed an indirect effect on likelihood to vote through VSE, though it did not show a significant direct effect.

**Figure 5**

Utilized Model of Depression, Voting Self-Efficacy, and Likelihood to Vote ( $N = 500$ )



*Note:* Blue arrows indicate significant regressions.



**Table 13*****Bivariate Correlations and  $p$ -Values between Study Variables ( $N = 500$ )***

	Depression	Voting self- efficacy	Likelihood to vote
Depression	-	.012	.913
Voting self- efficacy	-0.11*	-	< .001
Likelihood to vote	0.01	0.39*	-

*Note:* \* indicates significant correlation,  $p < .05$ .

**Table 14*****Regression Coefficients, Standard Errors, and Significance Levels for Depression******Model Paths ( $N = 500$ )***

Parameter	$b$ ( $\beta$ )	S.E.	$p$
Voting self-efficacy $\leftarrow$ Depression	-.14 (-.12)	.06	.025
Likelihood to vote $\leftarrow$ Depression	.04 (.05)	.03	.254
Likelihood to vote $\leftarrow$ Voting self- efficacy	.27 (.42)	.03	<.001

## CHAPTER IV

### DISCUSSION

The primary goals of the current study were first, to test a socio-cognitive model of voting behavior and second, to better understand the relationship between depression, voting self-efficacy, and likelihood of voting, especially among young Latinxs. Latinxs show significantly lower rates of voting than other ethnic groups. Voting has been associated with a variety of positive mental health outcomes, such as life satisfaction and agency (Decamp et al., 2015; Lang & Pacheco, 2010), while non-voting behavior is associated with negative mental health outcomes, especially depression (Ballard et al., 2018; Ojeda & Pacheco, 2017). Historically, researchers have failed to study the specific predictors of likelihood to vote among Latinxs, focusing primarily on White, non-Latinx potential voters. I developed and tested a model, utilizing SCT, to examine behavioral, social, and cognitive influences on likelihood to vote among a diverse sample of 500 college-attending registered voters, intentionally oversampling Latinxs. I tested a second model with the same sample in order to examine the relationship between voting self-efficacy, mental health (depression), and likelihood to vote. Overall, results from the current study indicate that Latinx and non-Latinx participants reported similar levels of likelihood to vote, and that their socio-cognitive predictors of voting may differ. There was mixed support for study hypotheses.

This chapter is organized as follows. First, I present variable-level findings and results associated with specification of the observed and latent variables. I then present testing for group differences as a function of gender and ethnicity. This is followed by the findings associated with the test of the first model and second model, respectively. Next,

I present study strengths and limitations, implications, and conclusions. I frame the discussion of findings using Social Cognitive Theory to interpret results.

## **Specification of Variables**

### ***Likelihood to Vote***

The outcome variable in both structural models was likelihood to vote. Measurement of likelihood to vote has been notoriously inconsistent in political research (Keeter et al., 2016). I included two different measures of the construct, and began by testing whether these items could be combined to form a one- or two-factor solution (Glasford, 2008; Keeter et al., 2016). Based on my findings, I used only the Glasford (2008) measure of likelihood of voting. I used the mean of the three items to assess for group differences. Overall, participants' reported likelihood to vote was high.

### ***Voting Self-Efficacy***

Given that the current study focused on exploring voting likelihood from a SCT perspective, one of the core components of the current study was the development and testing of a voting self-efficacy measure. During the literature review stage of the current study, no measures of voting self-efficacy were located, incentivizing the development of an appropriate measure. I developed the items utilizing Bandura's (2006) recommendations in developing self-efficacy scales. Results of an EFA of the six items indicated a unifactorial structure, providing partial support for the validity of this measure.

### ***Mechanisms of Self-Efficacy***

Based on Bandura's (1986) conceptualization of SCT, the mechanisms that influence the development of self-efficacy include enactive attainment, social persuasion,

and vicarious experience. Enactive attainment refers to previous instances of attempting the behavior (Bandura, 1986) and was measured through participants' binary responses as to whether or not they had previously voted in a national election. A high number of participants (68.4%) reported having previously voted. Vicarious experience refers to seeing or visualizing someone similar to the individual successfully carry out the behavior. In the current study, vicarious experience was measured through a single item asking how often the participant's parents voted during the participant's childhood. Social persuasion refers to others' expressed belief in the individual's ability to successfully carry out the behavior. In the current study, I utilized three social expectation items from Glasford (2008). These three items asked participants about how much other people in the participant's life believed that the participant should vote. Of note, these social expectation items do not directly measure the SCT construct of social persuasion of voting, as they focus more on social pressure and expectations to vote.

### ***Political Self-Efficacy***

Higher levels of PPSE have been associated with higher rates of a variety of political behavior, including voter turnout (Caprara et al., 2009; Leath & Chavous, 2017; Vecchione et al., 2014). The current study utilized PPSE both to generate validity data for the VSE and to account for the potential unique effect of political self-efficacy beyond the contributions of voting self-efficacy on likelihood to vote. Preliminary analyses showed that the ten items formed a one-factor structure with strong factor loadings and high reliability, consistent with prior research (Caprara et al., 2009).

### ***Cost of Voting***

Cost of voting was used in the current study to examine environmental factors impacting likelihood to vote. Cost of voting index (Li et al., 2018) scores were utilized to measure the relative impacts of state governmental policy on likelihood to vote. Study participants were assigned a COVI score based upon the state in which they were registered to vote. Study participants who were registered to vote represented 29 US states.

### ***Depression***

Depression was measured in the current study using the CES-D 10. Based on preliminary analyses, I removed two items. Mean depression scores were higher (1.12) than those found among Latinx adults by González and colleagues (0.73; 2017), though lower than a sample of Latinx and White college students (1.94; Piña-Watson et al., 2019). At the time of writing the current manuscript, the impact of the COVID-19 pandemic on mental health is unclear, though preliminary research indicates that rates of depression and anxiety may be higher among adult US populations during the pandemic (Marroquín et al., 2020). Additionally, research indicates that young adults and Hispanic adults experienced increased levels of depression resulting from the COVID-19 pandemic (Daly et al., 2021). Further, Latinx populations may be experiencing worsened mental health due to heightened racist rhetoric and policy decisions during the Trump administration (Canizales & Vallejo, 2021).

### **Demographic Differences**

#### ***Gender Differences***

I hypothesized that female participants would be more likely to intend to vote than males. Findings were consistent with this hypothesis, as female participants

endorsed higher likelihood to vote than did male participants. Women in the United States have consistently shown marginally higher voter turnout than their male counterparts since 1984 (Igielnik, 2020). In the current study, it appears that this gender difference is also present among college-educated registered voters regarding expressed likelihood to vote.

In previous studies, males have demonstrated higher rates of PPSE than females (Caprara et al., 2009; Vecchione et al., 2014). As such, I hypothesized that male participants would endorse higher rates of PPSE than females. In the current study, however, I found no significant difference between male and female participants' PPSE scores. This finding may be due to differences in the samples. Previous studies using the PPSE measure have primarily sampled European populations, including non-college populations and populations significantly older than the current sample. The absence of gender differences in PPSE may be due to the relatively restricted range of the age group or the different national context of the present sample.

There was no previous research available on voting self-efficacy, however, based on previous research indicating higher levels of political self-efficacy in males than females (Caprara et al., 2009; Vecchione et al., 2014), I predicted that males would show higher levels of VSE. Results were inconsistent with this hypothesis; there was no statistical difference among VSE scores by gender. Further, there were no significant differences in history of voting by gender. This is counterintuitive, as women are more likely to vote in the general US population and reported a higher likelihood of voting in the current sample. The lack of gender differences on history of voting may have to do with the fact that because this was a sample of young voters, participants had not yet

experienced enough elections for historical gender differences to arise. There were no statistical differences among the social persuasion items by gender. As would be expected, there was no statistical difference of reports of parental voting between male and female participants. In theory, there should be no gender differences in COVI scores, as men and women are equally roughly likely to live in any given state. Indeed, there was no significant difference between the COVI scores of men and women in the current study. Finally, female participants reported higher levels of depression than males. This is consistent with a large body of research indicating that females in the United States demonstrate higher rates of depression than males (Albert, 2015).

### ***Ethnic Differences***

I hypothesized that White participants would be more likely to intend to vote than Latinxs. Results were inconsistent with this hypothesis, as there was no statistical difference between the two ethnic groups on likelihood to vote. This was a surprising finding, as young Latinx voter turnout consistently falls behind that of other ethnic groups in the United States (United States Census Bureau, 2017). One potential explanation of this finding is that education is a strong predictor of voter turnout and this sample of voters was all engaged in higher education. In the United States in 2017, roughly 36% of young adult Latinxs were enrolled in college (Postsecondary National Policy Institute, 2020). As such, this sample is not generalizable to all Latinx young adults in the United States. In previous research, Latinxs have shown lower levels of PPSE than their non-Latinx White counterparts (Michelson, 2000). Considering this evidence, I predicted that Latinx participants in the current study would show lower levels of PPSE than their White non-Latinx counterparts. Counter to the hypothesized

difference, Latinx participants showed higher levels of PPSE than non-Latinx White participants in the current study. This is especially interesting, considering that there was no difference between the ethnic groups on voting self-efficacy. In a previous study of PPSE among White and Latinx populations, Michelson (2000) did not account for the impact of education in between-group analyses of PPSE. As such, it is possible that education differences were responsible for those findings. Although Latinxs generally show lower levels of PPSE than non-Latinx Whites, Latinxs with higher levels of education may show higher relative levels of PPSE. Another issue that may contribute to this discrepancy is generation. The 2020 election involved an abnormally high rate of young voter turnout, especially among ethnic minorities (Beadle et al., 2020). The unexpectedly high rate of young Latinx PPSE in the current study may be indicative of a broader shift in political self-efficacy and behavioral engagement in the population.

I predicted that White participants would show higher levels of VSE than Latinxs due to previous research indicating lower levels of political self-efficacy among Latinx than Whites (Michelson, 2000). Results were not consistent with this hypothesis, as there was no significant difference in VSE score between ethnic groups. As there was no previous research available on voting self-efficacy, it may be there is no difference in voting self-efficacy between White and Latinx college-educated registered voters. I return to this finding when discussing study implications for the utility of SCT to understand voting likelihood. Additional research will be needed to determine whether this finding can be replicated in other samples of White and Latinx college-educated registered voters, as well as voters of other educational and developmental levels. I also tested for ethnic differences among VSE mechanisms. Regarding history of voting, there



was no statistical difference between the voting histories of White and Latinx participants, in spite of lower rates of Latinx voting nationally in prior elections (United States Census Bureau, 2017). This may be due to the young adults in the current sample not having experienced enough national elections to have a current difference in voting histories. There were no ethnic differences among the social persuasion variables, indicating that Latinx and White participants were equally likely to experience a sense of pressure or duty to vote from others around them. There was a statistical difference between the parental voting of Latinx and White participants, with White participants reporting that their parents were more likely to have voted during their childhood. This is consistent with theory, as Latinx citizens in the United States are the most likely group to be first- or second-generation American (Pew Research Center, 2013), and thus least likely to have parents who voted in US elections previously.

Because voter suppression efforts are more likely to be developed and applied in states with high levels of ethnic minorities, including Latinxs (Anderson, 2018; Atkeson et al., 2010), there could be a theoretical justification for a difference of COVI scores by ethnicity. Further, the majority of the voting-eligible Latinx population in the United States resides in five US states (Krogstad & Noe-Bustamante, 2020). In the current sample, however, there was no significant difference between the COVI scores of Latinx and White non-Latinx participants. The variability of the two groups did differ significantly with White voters showing a greater range of COVI scores. Regarding depression, the current study found no significant difference. This was in line with other literature, as Latinxs do not consistently show different rates of depression compared to their White counterparts (Chen et al., 2019; Dunlop et al., 2003).

## **Model Testing and Results**

In this section I consider the results from testing the two structural equation models. First, I discuss findings related to the social cognitive model, then the model examining the role of depression on likelihood to vote. For each model, I examine model fit, regression weights, and any mediation analyses. After the discussion of model analyses, I discuss how the current study fits from a critical consciousness perspective, then study strengths and limitations.

### ***Social Cognitive Model of Voting Likelihood***

The result that the SCT model of likelihood to vote did not yield a good fit to the data may be due to a few factors. First, it may be due to the relatively low overall correlations between variables in the proposed model (Kline, 2016). In particular, the likelihood to vote variable showed lower correlations with other variables than anticipated. This may be related to the difficulties in measuring likelihood to vote, which will be discussed in greater length in the study limitations. In addition, voting history showed lower correlations with variables than expected. It may be that including only registered voters restricted variability of voting history, suppressing the magnitude of correlations. This will also be discussed further in study limitations. Second, given the high number of estimated parameters (113), the model could benefit from being more parsimonious. A reduction in the number of variables may improve model fit (Kline, 2016).

One advantage of structural equation modeling analyses is the ability to compare multiple regressions (Kline, 2016). In this case, I was able to evaluate the influence of multiple exogenous independent variables on two endogenous dependent variables – VSE

and likelihood to vote. Next, I explore regression and correlation analyses within the social cognitive model of young voters' likelihood to vote.

**Voting Self-Efficacy.** I hypothesized that VSE would be positively associated with likelihood to vote. VSE and likelihood to vote were positively and significantly correlated, and in regression analyses, VSE accounted for the most variance in likelihood to vote. This association in conjunction with the lack of ethnic group differences in VSE, may in part explain why there was no observed ethnic difference among likelihood to vote scores. This provides some support for the predictive validity of the VSE, as self-efficacy for a particular behavior should be associated with higher levels of engaging in the behavior (Bandura, 1986). Next, I examine VSE and likelihood to vote in terms of three key predictors: enactive attainment, vicarious experience, and social persuasion variables.

**Enactive Attainment.** In the structural model, voting history served as an exogenous variable and the indicator of enactive attainment, with predictive paths toward VSE and likelihood to vote. Previous voting history significantly and positively correlated with VSE, likelihood to vote, and COVI. Regression analyses indicated that voting history was positively and significantly associated with VSE. The significant path from enactive attainment to VSE is consistent with SCT and adds to validity evidence for the VSE measure.

Previous voting behavior has been associated with higher likelihood to vote in the future (Gerber et al., 2003; Green & Shachar, 2000) and as such I hypothesized that previous voting would predict higher likelihood to vote in the current model. The direct path toward likelihood to vote was significant and positive, consistent with the

hypothesis. Because the three paths were significant (from voting history to VSE and likelihood to vote, and from VSE to likelihood to vote), parametric bootstrapping was utilized to evaluate for potential mediation between the three variables. Results indicated that VSE mediates the relationship between history of voting and likelihood to vote, such that the effect of history of voting on likelihood to vote is stronger when VSE is higher. This may indicate that previous voting facilitates the development of VSE, which in turn increases one's likelihood to vote, or that those who have previously voted but have low VSE are less likely to vote. Further research is needed to better understand this relationship.

In addition to positive associations with VSE and likelihood to vote, previous voting behavior (enactive attainment) showed a significant positive correlation with COVI score. This positive relationship with cost of voting is counter-theoretical, as environmental barriers to voting should, in theory, decrease an individual's actual likelihood of voting. One possible explanation relates to the measurement of cost of voting. COVI scales are determined in the months after an election (Li et al., 2018), and at the time of analyses, data for 2020 COVI scales was not available. It is possible that use of 2020 COVI scores would have yielded a different outcome. Further research utilizing an updated scale may be valuable. Another possible explanation is that participants may have previously voted in a different state with a different COVI than the one in which they are currently registered to vote. Also, this may be that college students are not as directly impacted by cost of voting influences, as both major political parties in the United States are more likely to promote outreach among young people with college experience than among those without it (Kiesa et al., 2020). Finally, young adult voting

was highest and increased the most in 2020 in states that automatically sent mail-in ballots to voters prior to the election (CIRCLE, 2021).

**Social Persuasion.** In the structural model, all three items served as exogenous variables with predictive paths towards VSE and likelihood to vote. Regression analyses indicated that none of the three items was a significant predictor of VSE, and only one (“Most people who are important to me think I should vote in the 2020 presidential election”) significantly predicted likelihood to vote. Although preliminary analyses did not meet thresholds for multicollinearity, collinearity statistics were elevated and the lack of statistical significance may be due to multicollinearity (Lewis-Beck, 1980; Pedhazur, 1982).

All three social persuasion items significantly and positively correlated with one another, as well as parental history of voting, VSE, PPSE, and likelihood to vote. Regarding the relationship between the social persuasion items and VSE, a significant correlation indicates some relationship, though there were no significant regression coefficients. This may be because social persuasion did not account for variance over and above the effect of previous voting behavior (Pedhazur 1982). This is consistent with findings that enactive attainment is a more powerful influence on self-efficacy expectations than social persuasion, vicarious experience, or physiological response (Bandura, 1997). This also explains why the social persuasion items were not significant predictors of voting likelihood. As such, future research may explore these items as components of a latent construct or select a single item to represent social persuasion.

**Vicarious experience.** Similar to the enactive attainment and social persuasion variables, the parental voting variable served as an exogenous variable with predictive

paths towards VSE and likelihood to vote. Parental voting history was positively and significantly correlated with VSE and all three social persuasion variables. Regression analyses indicated that parental voting was not significantly associated with VSE or likelihood to vote. A relationship between parental voting and VSE would have been supported by SCT theory, as vicarious experience has been demonstrated to contribute to self-efficacy (Achterkamp et al., 2016). The lack of a significant relationship between parental voting and likelihood to vote was also not aligned with previous research. A wealth of evidence indicates that citizens whose parents voted during their childhood are more likely to vote themselves (Bhatti & Hansen, 2012; Pacheco & Plutzer, 2007; Plutzer, 2002). At the bivariate level, parental voting was positively and significantly correlated with VSE and all three social persuasion items. One explanation for the regression between parent voting and VSE and likelihood to vote did not yield a significant coefficient relates to group differences. It may be the case that the relationships between parental voting, VSE, and likelihood to vote are different as a function of ethnic group membership. Continued research into a potential ethnic group difference is needed to more fully understand the relationships between vicarious experience, VSE, and likelihood to vote. Further, this may also have to do with previous voting behavior accounting for variance that would otherwise be attributed to vicarious experience (Pedhazur, 1982). From an SCT perspective, previous behavior is theorized to have the strongest influence of all components on future behavior (Bandura, 1986).

**Perceived Political Self-Efficacy.** In the proposed structural model, the latent PPSE variable served as a covariate of likelihood to vote. PPSE showed a significant positive correlation with VSE, likelihood to vote, and the three social persuasion

variables. I hypothesized that PPSE would be a significant predictor of likelihood to vote. PPSE was not a significant predictor of likelihood to vote, despite being significantly positively correlated. As such, the hypothesis was partially consistent with study results. It appears that although PPSE does have a relationship with likelihood to vote, shared variability is more adequately explained through relationships between likelihood to vote and other predictors, such as VSE. This is theoretically supported, as voting self-efficacy relates directly to the act of voting, while PPSE measures self-efficacy for a variety of political behaviors, including voting but also collective political action, such as carrying out political information campaigns.

**Cost of Voting.** Higher COVI scores have been associated with lower rates of voter turnout on the state and individual levels (Li et al., 2018). I hypothesized that higher COVI scores would be associated with lower likelihood to vote scores. This hypothesis was not consistent with results, as there was no significant relationship between likelihood to vote and COVI score. One reason for a lack of association between COVI score and likelihood to vote may have been that because participants had already registered to vote, they had already passed through a filter of cost of voting, with individuals with high cost of voting less likely to have successfully registered to vote and therefore ineligible to complete the survey. Another reason for a non-significant relationship between COVI score and likelihood to vote may have had to do with our likelihood to vote variable itself. While COVI scores were designed to measure state policies' impact on voter turnout (Li et al., 2018), our measure for likelihood to vote did not directly measure whether or not a participant voted in the 2020 election. Rather, our combined measure assessed for an individual's plan, expectation, and intent to vote.

This may indicate that while cost of voting does show a significant association with actual voting behavior, it may not affect an individual's belief that they will be able to do so. An individual may expect to be able to vote, but find that when they arrive at a polling place, their records have been removed from voter rolls or they do not have the correct form of identification, strategies which disproportionately affect voters of color (Clarke, 2020).

### ***Model of Depression, Voting Self-Efficacy, and Likelihood to Vote***

Another goal of the study was to examine the relationship between depression and voting behaviors, especially among young Latinxs. Ojeda and Pacheco (2017) found a bidirectional negative relationship between depression and voting behavior and highlighted the need for further investigation of the relationship between depression and voting behavior. Ojeda and Pacheco (2017) argue that depression serves as an especially harmful inhibitor of engagement in voting behavior due to physical, emotional, and cognitive components of the voting process. In addition to developing a social-cognitive theoretical understanding of likelihood to vote, the current study aimed to better understand the relationship between depression, VSE, and likelihood to vote. Experiences of racism toward Latinos increased under the Trump administration, which may have contributed to negative emotional and mental health outcomes among Latinos in the United States (Canizales & Vallejo, 2021). The pandemic also appears to have been associated with higher levels of depression, including among young people and Latinx people (Daly et al., 2021). Regarding testing the depression structural model, the SRMR, CFI, Hoelter's *N*, and RMSEA measures all indicated good fit. There were three



predictive paths in the model. The following subsections explore regression and correlation analyses within the depression model.

**Voting Self-Efficacy.** The VSE latent variable served as a predictor for likelihood to vote, meaning that those who reported greater confidence in their ability to navigate the tasks associated with voting reported greater likelihood that they would vote in the next election. In addition to serving as a predictor of likelihood to vote, VSE was predicted by depression in the current model.

**Depression.** Depression served as an exogenous variable with predictive paths toward VSE and likelihood to vote. As expected, depression showed a significant and negative relationship with VSE. This result is consistent with the notion that depressed citizens are less likely to vote (Pacheco & Fletcher, 2015; Pacheco & Plutzer, 2007), as depression can lead to lower levels of self-efficacy in many domains (Tahmassian & Jalali-Moghadam, 2011). The path from depression to likelihood to vote was not significant, contrary to expectations. However, depression did show a significant indirect effect on likelihood to vote through the relationship between depression and voting self-efficacy. This result provides further support of the criterion validity of the VSE measure, as depression is consistently associated with lower levels of self-efficacy in a variety of contexts (Tahmassian & Jalali-Moghadam, 2011).

Additionally, considering that females endorsed significantly higher rates of both depression and likelihood to vote, the lack of a measured effect of depression on likelihood to vote in the current study may be due to not including gender from the model. When both independent and dependent variables show a significant between-group difference, combined within-group differences may be obscured (Keppel &

Wickens, 2004). In the current study, the relationship between depression and likelihood to vote did not account for gender. Ojeda and Pacheco (2017) found a significant cross-sectional and longitudinal association between depression and likelihood to vote after accounting for many other influences, including gender, family income, GPA, educational attainment, and familial makeup. Future research exploring the impact of depression on likelihood to vote should account for gender. Next, I examine the current findings through the lens of critical consciousness, then I discuss the study strengths and limitations.

### **Critical Consciousness**

The connection between depression, voting self-efficacy, and likelihood to vote can be examined through a lens of critical consciousness. As previously noted, critical consciousness is associated with improved social and mental health outcomes (Delia & Krasny, 2018; Heberle et al., 2020). Engagement in critical action among adolescents and young adults has been associated with higher career aspirations and potentially higher career attainment later in life (Rapa et al., 2018). Further, higher levels of critical reflection have been associated with higher likelihood to vote among Latinx young adults (Bañales et al., 2019). In the current study, I closely examined voting self-efficacy, a concept related to the political efficacy component of critical consciousness (Watts et al., 2011b). I found a significant and negative relationship between depression and VSE in the current study. In a study of the relationships between components of critical consciousness and socioemotional states among youth of color, high critical reflection and low political efficacy was associated with higher rates of depression, and high critical reflection and high political efficacy was associated with relatively low rates of

depression (Godfrey et al., 2019). This indicates that for young people who are able to critically analyze social and political systems, confidence in their ability to directly impact these systems (i.e. through voting) may prevent the development of depressive symptoms. Critical consciousness provides a framework by which one may improve an individual's voting self-efficacy, and future research could benefit from exploring a potential connection between the two concepts.

In the United States, there has been a concerted effort during and since the 2020 election to further prevent communities of color from voting (Fausset et al., 2021; Neibergall, 2021). The restriction of voting rights and access has long been one of the fundamental strategies for limiting the power of oppressed groups, especially Black and Latinx communities in the United States (Alexander, 2010; C. E. Anderson, 2018; John-Hall, 2021; Nash, 2000). Critical consciousness reflects an individual's ability to recognize and change social realities, especially oppressive ones (Freire, 1971, 2005). Considering the current actions to suppress Black and Latinx voters, researchers and interventionists in critical consciousness must continue to prioritize improving access to voting, as well as explore the potential to improve communities' involvement in voting through improving VSE. In this regard, enhancing Latinx voters' critical consciousness and particularly their sense of agency for voting and effecting political change (Godfrey et al., 2019) may help offset the effects of depression and voter suppression on likelihood to vote.

### **Study Strengths**

The current study demonstrates several strengths and provides unique contributions. In this section, I examine some of these strengths, then move to explore the

study's limitations. One key strength of the study was its explicit focus on Latinx students. Leighley (2014) noted that despite representing the second largest ethnic group in the United States, the study of voting behavior among Latinxs lags far behind that of White and Black/African American citizens. Through intentional oversampling, over 40% of the current sample identified as Latinx. In order to facilitate and encourage participation among Latinx participants (G. Bernal et al., 2003), the study and recruitment materials were made available in both English and Spanish. Further, in order to obtain a culturally diverse Latinx group (Adames & Chavez-Dueñas, 2017), I sought participation from a geographically diverse sample, resulting in responses from Latinxs in 29 US states who trace their familial origin to 20 different Latin American countries. Further, the overall sample size utilized was a strength.

Other strengths of the study included its adherence to theory and its specific utilization of SCT in predicting likelihood to vote. One of the most valuable aspects of utilizing structural equation modeling is its ability to test the fit of theory-driven models (Anderson & Gerbing, 1988; Kline, 2016). Specification of this theoretical model of likelihood to vote provides an opportunity for other models to be tested against it, which may ultimately improve understanding of factors that influence likelihood to vote. Further, while many previous studies have integrated aspects of SCT in predicting likelihood to vote (Caprara et al., 2009; Darmofal, 2010; Torney-Purta et al., 2010), I was unable to find any research testing a full model of voting likelihood within an SCT framework. As such, the current study represents a unique contribution to the literature.

One of the most valuable contributions of the current study was the development of a VSE measure. This measure was developed specifically to evaluate participants'

self-efficacy for voting. One of the benefits of a measure of VSE conceptually is that it simultaneously offers a potential statistical predictor of likelihood to vote while also providing a point of interventions for improving people's agency for influencing political outcomes and systems. Although the present findings are cross sectional, in keeping with SCT (Bandura, 1986; 1997), enhancing young voters' voting self-efficacy should improve the likelihood that they will vote. In the current study, VSE demonstrated greater predictive value regarding likelihood to vote than personal history of voting, parental voting history, environmental influences, and social pressure to vote. Further, as Bandura (1986) points out, measuring self-efficacy can provide useful points of intervention in a variety of fields of behavior change. The larger literature on sources of self-efficacy suggests specific pathways for improving young voters' confidence in their ability to successfully engage in voting behavior: previous voting behavior, parental voting history, social pressure to vote, and depression (Bandura, 1982, 1986; Tahmassian & Jalali-Moghadam, 2011)

The VSE measure showed a cohesive factor structure and internal consistency reliability, with promising evidence of validity. This measure may be useful in future research focused on predicting likelihood to vote, and with continued research, perhaps even actual voting behavior. Future research should explore whether VSE has the same strong association with voting behavior that it has with likelihood to vote. Another strength of the current study relates to the time in which it was conducted. A record number of young adults voted in the 2020 election (Beadle et al., 2020) and the current sample was collected among young adults in the months leading up to the election. Further, young adults in key states voted for President Biden by a larger margin than the

total margin of votes by which the states were decided (Beadle et al., 2020). As a result, researchers of young voter turnout will likely look to 2020 as one of the most significant election years in terms of young voter turnout and the current sample will likely be one of the most influential group of young adult voters in US history.

### **Study Limitations**

The results of this study should be considered in light of the study's limitations. In this section, I first examine limitations regarding the sampling methods and participant population. Then, I address limitations regarding the study design and measurement. After discussing these limitations, I offer directions for future research in light of the current study's findings.

One significant limitation of the current study was that, although the sample included meaningful diversity with regards to ethnicity and geography, the sample could have benefitted from increased diversity with regards to gender and citizenship type. The relative lack of transgender/third-gender responses precluded my ability to examine study variables among participants with non-binary gender identities. Further, as 77% of respondents identified as female, a larger sample of males would also be helpful in understanding relationships among study variables among diverse gender identities. Regarding citizenship type, only 21 participants identified as naturalized citizens, preventing any meaningful analyses of study variables by citizenship type. Future studies on likelihood to vote would benefit from increased diversity regarding gender and citizenship type.

Another sampling issue related to the education level of participants. In order to recruit a sufficiently large number of young adult participants for SEM analyses, I

recruited from colleges and universities around the United States, especially political science, psychology, and Latinx studies departments. Roughly 41% of young adults are enrolled in or have attended college (National Center for Education Statistics, 2020) and as such, the current study is not generalizable to young adults who have not attended higher education. This bias may explain the high rates of likelihood to vote in the current sample, as citizens with college experience are more likely to vote than those without it (United States Census Bureau, 2017). Further, students attending college tend to come from families with higher social capital (Bryan et al., 2017; K. P. González et al., 2003), likely meaning that their parents were themselves more likely to vote than for the average young person.

Although the proposed model was grounded in theory, it is not possible to infer a causal relationship between predictor variables and likelihood to vote. Future studies may utilize longitudinal designs to strengthen investigation of causal and directional effects (Preacher, 2015). One of the statistical and theoretical limitations of the study was that locational data was collected only by asking zip codes in which participants were registered to vote. As a result, location data was not available for potential voters who were not yet registered to vote. This process eliminated 85 participants from the analyses, which likely contributed to problems in measurement and may have suppressed correlations relating to COVI and likelihood to vote.

Another design limitation with the current study related to the outcome measure of likelihood to vote. As previously discussed, measures of likelihood to vote have been unreliable and inconsistent (Keeter et al., 2016). Given the limitations of existing measures, and the key role that likelihood to vote plays in this study, I selected two

different measures with the intention of testing their structure and reliability in this sample (Glasford, 2008; Keeter et al., 2016). The five-item scale derived from Keeter and colleagues (2016) failed to create a clear one- or two-factor scale when combined with the three items from Glasford (2008) or independently. As such, the three items from Glasford (2008) were utilized within both structural models. Problematically, however, the Glasford items showed low levels of variance, potentially limiting the possibility of finding significant differences in variance in ANOVA and regression analyses (Keppel & Wickens, 2004; Pedhazur, 1982). Further, regarding the CES-D 10 items, the two reverse-coded items did not adequately fit in a one- or two-factor structure. This was not reported in previous research and may have reduced the validity of our measure of depression.

Perhaps related to these measurement issues, the social cognitive model predicting likelihood to vote did not achieve a good fit to the data, nor did the indicators of the sources of self-efficacy account for significant variance in VSE. Likelihood to vote may not have been well measured, and there was an inconsistency between the measure of social persuasion and the intended construct. Specifically, our social persuasion measure assessed other's beliefs that the participant should vote (Glasford, 2008), rather than acts of encouragement from others about voting (Bandura, 1986). Future research on a social cognitive model of voting should engage better indicators of the sources of self-efficacy in order to better capture these relationships. from a social cognitive perspective.

Another limitation regarding the design of the current study related to the time of the data collection. While 2020 was an especially important year for studying the voting likelihood of young adults, it was also unlike other election years. During the fall of



2020, many Americans experienced a different voting system than they had previously due to COVID-19 restrictions. Many potential voters were likely discouraged from engaging in in-person voting due to concerns relating to the pandemic, while previous non-voters in states which expanded mail-in voting access may have voted due to improved ease of access (Sullivan, 2020). Due to the changes in access and engagement with the voting process in the 2020 election, aspects of the current study regarding likelihood to vote may not be generalizable to young voters in other elections.

### **Implications**

There is a limited amount of research on the relationship between mental health symptoms and voting behavior. As such, the current study provides valuable insights into potential avenues of continued research. Some of the primary findings of the current study were strong associations between VSE and several constructs, including depression and voting likelihood. Continued validation of the measure and a further examination of how depression may affect VSE, which may in turn affect likelihood to vote may provide new methods of increasing voter turnout among low-turnout populations, as well as provide greater opportunities to bridge the fields of political and counseling psychology. Another potential area of future study would involve examining voting self-efficacy and voting likelihood longitudinally, including measuring voting self-efficacy in adolescence as a predictor of voting likelihood in early adulthood. Because this is the first known study examining voting self-efficacy, future research should continue to explore for potential differences in VSE by gender and ethnic group. Further, while research examining intent to vote can be useful in predicting voting behavior, there is a need to study the relationship between VSE and actual voting behavior, especially given recent

increases in attacks on voting rights in the United States (Hunnicut, 2021; Levine, 2021; Russonello, 2021).

Within the current study, there were several results that would have been significant under a less stringent adjusted alpha that may serve useful for future research. VSE may be lower among Latinx than White young adults ( $p = .05$ ). This would be supported by the fact that Latinx young adults are less likely to vote than their White counterparts (United States Census Bureau, 2017) and are less likely to have vicarious experience of parental voting. Latinx young adults in this sample had higher levels of PPSE than their White counterparts ( $p = .01$ ). Young Hispanic citizens in 2020 identified as more politically engaged than those from years prior, though they do not show higher levels of identifying as politically engaged than non-Hispanic White citizens (Kennedy School Institute of Politics, 2021). VSE items focus on preparation and resiliency in carrying out specific voting behaviors while PPSE items are oriented toward confidence in one's ability to carry out broader behaviors, such as mobilizing community members and promoting candidates. This may indicate that while Latinx young adults feel more efficacious in collective political action (i.e. attending marches or supporting political campaigns), they felt less efficacious in engaging in the voting system.

## **Conclusion**

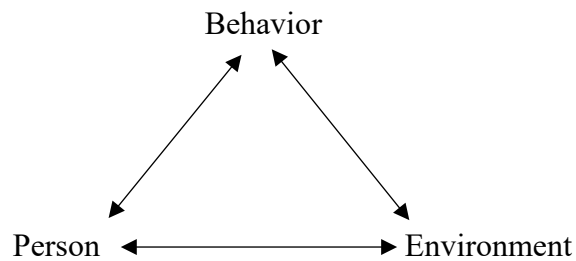
Latinx young adult citizens are among the least likely to vote in the United States. This study contributes to existing literature on Latinx young adult voting influences by exploring socio-cognitive influences on voting likelihood, including depression, political and voting self-efficacy, and environmental factors in a sample with a disproportionate number of Latinx young adults. Results indicated that the measure of voting self-efficacy

developed for the purpose of this study shows promise and may be a valuable tool in bridging the fields of political and counseling psychology. Additionally, depression showed a meaningful association with likelihood to vote through its relationship with voting self-efficacy. Overall, SCT offers valuable insights into mechanisms of voting behavior that may provide means of addressing voting disparities in Latinx communities and help support the empowerment of this growing and important group of young people.

## APPENDIX A

Figure 1

Bandura's Triadic Reciprocity Model (Bandura, 1986)



*Note: Based on Bandura's (1986, p. 25) model.*

Figure 2

Proposed Social Cognitive Model of Likelihood to Vote

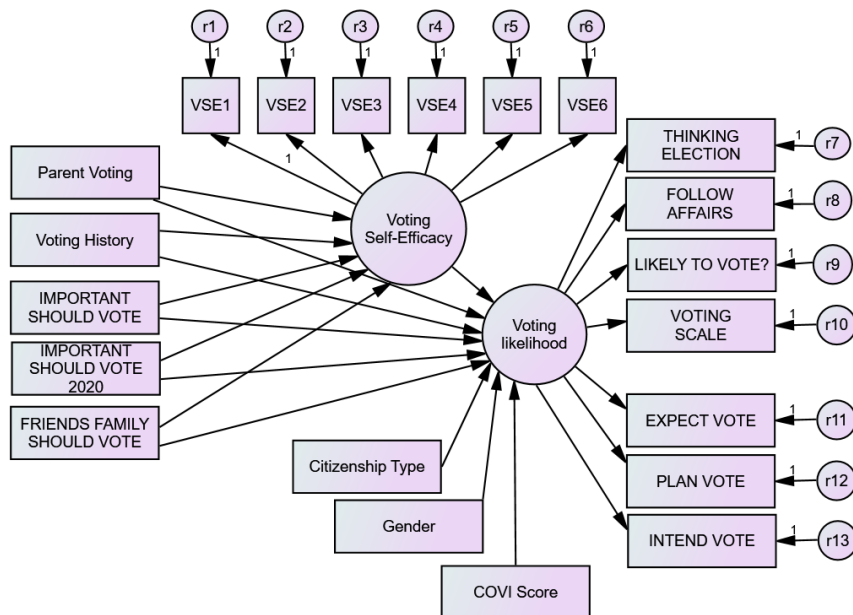




Figure 4

Utilized Social Cognitive Model with Standardized Estimates

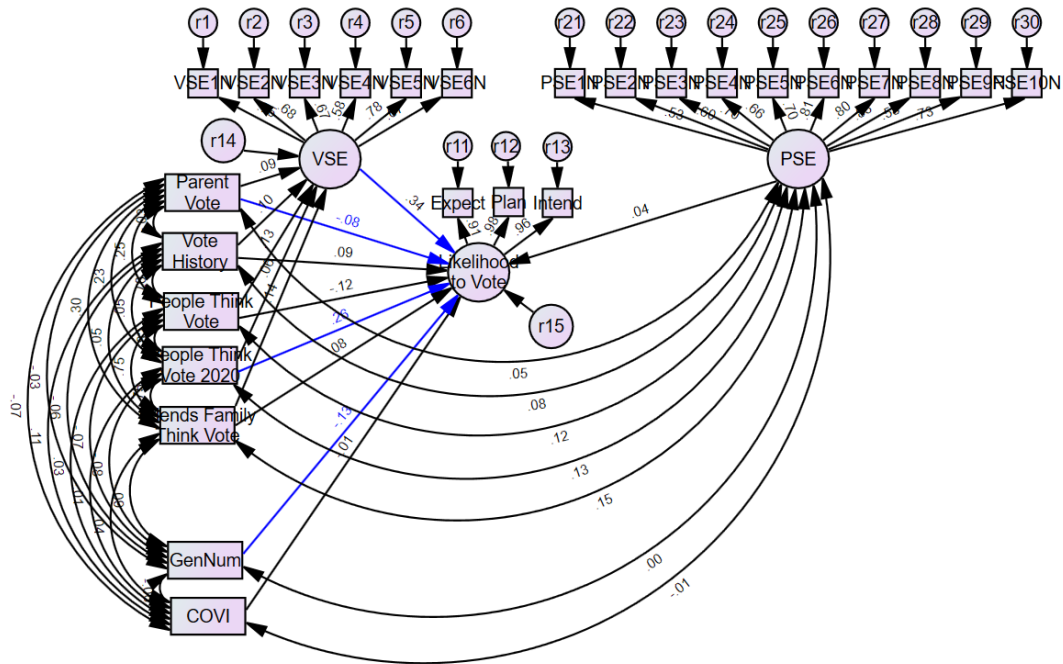
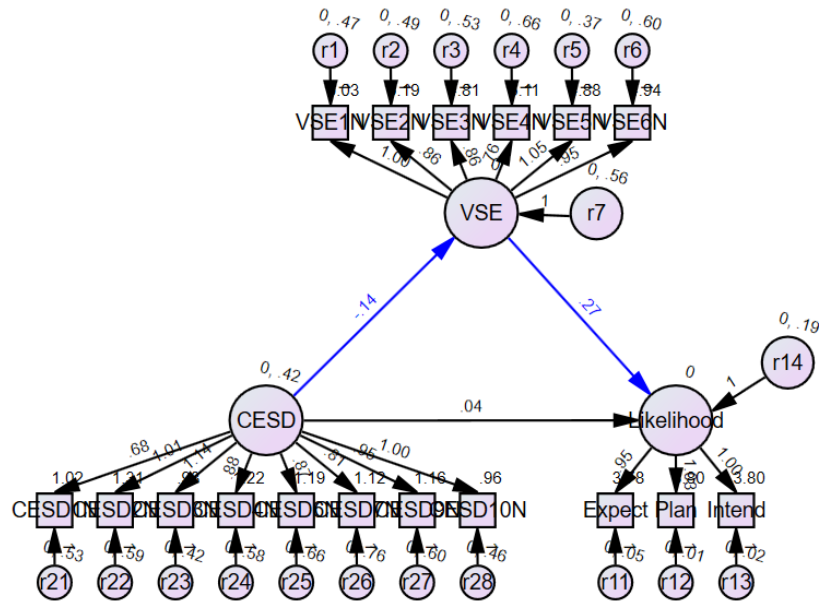


Figure 5

Utilized Model of Depression, Voting Self-Efficacy, and Likelihood to Vote



## APPENDIX B

### Voting likelihood

How much thought have you given to the coming November election? (THINKING ELECTION) *Quite a lot, some, only a little, none*

\*Have you ever voted in your precinct or election district? *Yes, no*

Would you say you follow what's going on in government and public affairs most of the time, some of the time, only now and then, hardly at all? (FOLLOW AFFAIRS)

\*How often would you say you vote? *Always, nearly always, part of the time, seldom*

How likely are you to vote in the general election this November? (LIKELY TO VOTE?)

*Definitely will vote, probably will vote, probably will not vote, definitely will not vote*

\*In the 2012 presidential election between Barack Obama and Mitt Romney, did things come up that kept you from voting, or did you happen to vote? *Yes, voted; no*

Please rate your chance of voting in November on a scale of 10 to 1. (VOTING SCALE)

*Note:* Items with asterisks are omitted for first-time voters.



### Proposed Voting Self-Efficacy items

*For each of the following items, please rate how confident you are in your ability to execute*

*the specific action or behavior described:*

1. Have enough information to register to vote
2. Successfully register to vote online, through the mail, or in person
3. Overcome obstacles relating to voting
4. Find time and transportation to vote on or before election day
5. Learn about information regarding upcoming elections
6. Make an informed decision on who to vote for

Political Self-Efficacy Items (Caprara et al., 2009)

*For each of the following items, please rate how confident you are in your ability to execute*

*the specific action or behavior described:*

1. State your own political opinion openly, even in clearly hostile settings
2. Make certain that the political representatives you voted for honor their commitments to the electorate
3. Promote public initiatives to support political programs that you believe are just
4. Maintain personal relationships with representatives of national government authorities
5. Play a decisive role in the choice of the leaders of political movements to which you belong, or to which you are near
6. Carry out an effective information campaign for the political movement or party with which you concur regarding beliefs and programs
7. Actively promote the election of political candidates in which you trust
8. Promote effective activities of information and mobilization in your own community (of work, friends, and family), to sustain political programs in which you believe
9. Collect a substantial amount of money to sustain the activities of your party
10. Use the means you have as a citizen to critically monitor the actions of your political representatives

Centre for Epidemiological Studies Depression Scale (CES-D-10) items (English and Spanish)

*Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.*

- |   |  |
|---|--|
| 1. I was bothered by things that do<br>not usually bother me. | 1. Me molestaron cosas que<br>normalmente no me molestan               |
| 2. I had trouble keeping my mind on<br>what I was doing       | 2. Tuve dificultad para mantener mi<br>mente en lo que estaba haciendo |
| 3. I felt depressed   | 3. Me sentí deprimido  |
| 4. I felt that everything I did was an<br>effort              | 4. Tuve la impresión de que todo lo<br>que hice necesitó esfuerzo      |
| 5. I felt hopeful about the future*                           | 5. Me sentí esperanzado acerca del<br>futuro*                          |
| 6. I felt tearful   | 6. Me siento miedoso   |
| 7. My sleep was restless                                      | 7. Mi sueño fue intranquilo  |
| 8. I was happy*   | 8. Yo estuve feliz*  |
| 9. I felt lonely  | 9. Me sentí solitario  |
| 10. I could not get going                                     | No pude ponerme “en marcha.”   |

*Note:* Items with an asterisk are reverse-coded.

Likelihood to vote predictors (Glasford,  
2008)

1. So far as I know, I expect to vote  
in the national election this  
coming November
2. I plan to vote in the 2004  
presidential election
3. I intend to vote in the 2004  
presidential election.”

Social motivation/social persuasion items (Glasford, 2008)

1. Most people who are important to me think I should vote
2. Most people who are important to me think I should vote in the 2004 presidential election
3. My friends and family think I should vote in the 2004 presidential election

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